

INDEX

Seventy-Second Quarto Volume—January 1, 1922, to June 30, 1922

AUTHORS

Abt, S., 263
Acworth, Sir William M., 261, 558,
1051, 1716
Adler, Charles, Jr., 1269
Aishton, R. H., 598
Armstrong, W. R., 1270
Artaud, T. P., 337
Augur, R. C., 49

Bailey, F. J., 461
Baldwin, L. W., 1233
Barnes, W. H., 1104
Barr, Wm. M., 364
Basford, G. M., 177, 1053, 1549
Beeuwkees, R., 1053
Beyer, O. S., Jr., 1290
Binkerd, Robert S., 236
Brown, Nelson Courtlandt, 743
Buell, D. C., 1287
Burnett, W. S., 1285

Cain, P., 413
Campbell, J. M., 1162
Caracristi, V. Z., 745
Carter, Charles Frederick, 581
Carter, F. W., 778
Castle, O. C., 811
Chamberlin, William F., 1061
Chorley, R. W., 412
Clagett, Brice, 1471
Clements, M. F., 1333
Cobb, Earl, 1289
Cole, J. E., 66
Colston, Col. W. A., 1745
Comstock, G. F., 1324
Cuyler, Thomas De Witt, 5

Davis, James C., 1169
Delano, Frederic A., 1004
Downs, L. A., 599, 626
Du Brul, Ernest F., 1559
Dudley, S. W., 1604
Dunn, J. H., 143
Dunn, Samuel O., 1105, 1163, 1211,
1271, 1743
Dyer, Gus M., 699

Eldridge, J. L., 462
Emerson, Harrington, 1011
Ennes, S., 1746

Farrell, H. E., 364
Fay, Thornwell, 75
Fish, F. P., 344
Fisher, Charles E., 953
Fisher, Walter L., 481
Ford, Robert H., 1009
Foss, Charles W., 47, 58, 133, 771,
829, 1055, 1119, 1347
French, D. K., 907

Garwood, E. F., 1159
Gibson, Grant, 1160
Giordano, Antonio, 85

Glazier, J. G., 1162
Glisson, Harry B., 873
Goldstein, Dr. J. M., 91
Gorniley, M. J., 1007
Grande, Julian, 88
Gray, Willis E., 862
Green, W. H., 313
Grewe, H. F., 423
Griffin, M. T., 111

Haggander, G. A., 730
Hanna, D. B., 1065
Hendricks, V. K., 270, 779
Hennessy, J. J., 487
Hershberger, David C., 216
Hines, Walker D., 287
Hooper, S. U., 1236
Hoover, Herbert, 379
Howard, James E., 237
Howson, E. T., 36
Huffman, J. T., 510

Jackman, W. T., 567, 735
Johnson, A. C., 1161
Juneau, C. G., 223, 1270

Kellenberger, K. E., 137
Kennicott, Cass, 1168
Koach, K. H., 55, 1341
Kraeger, Frank W., 124, 127, 131
Kruttschnitt, J., 6

Lacher, W. S., 43, 53
Landon, W. G., 907
Lane, Harold F., 9, 15, 27, 39, 1227
Laughton, H. H., 1697

Lee, Elisha, 1593
Leighton, George B., 954
Leshner, C. E., 1284
Lewes, R. C., 954
Lisman, F. J., 477
Long, A. E., 312
Lyne, James G., 113, 115

McAdoo, W. G., 327, 371
McFetridge, W. S., 1275
McKelligon, A. S., 1703
Markham, C. H., 7
Marks, G., 469
Marshall, R. C., Jr., 698
Mell, C. D., 744
Meyer, Eugene, 343
Milner, B. B., 101
Moore, Milburn, 147, 149
Morton, E. H., 812
Myers, A. C., 214

Oehler, Alfred G., 61

Parker, F. A., 362
Parkes, Charles E., 512
Parkes, Holcombe, 31
Parmelee, Julius H., 119

Partington, James, 909
Payne, J. L., 70, 1297
Peabody, F. S., 1283
Peabody, J. A., 1053
Peck, C. B., 43, 471
Pershall, E. E., 269
Peschaud, M., 81
Phillips, W. C., 533
Porterfield, J. F., 976
Powell, T. C., 826
Pownall, W. A., 794
Pyeatt, J. S., 75

Reder, G., 93
Rhoads, Stanley, 525
Robbins, Col. F. G., 1024
Roberts, J. W., 529
Roberts, M. S., 215
Robinson, A. F., 369
Robinson, Bird M., 1029
Robinson, Joseph, 906
Robinson, W. L., 1234
Rudd, A. H., 1345
Rusch, Frank, 833

Sands, C. Radford, 953
Schwinn, F. S., 1004
Scott, Prof. Charles F., 727
Shinn, Forrest S., 271
Slater, J. E., 341, 435
Smith, A. H., 7
Smith, Walter H., 1477
Sproule, William, 535
Stimson, Earl, 416
Stone, E. J., 861
Storey, W. B., 928
Stubbs, Linton W., 510
Stuebing, A. F., 51, 59

Taylor, H. N., 1104
Thayer, Robert E., 76, 95, 105
Thompson, Slason, 811
Thornley, E. W., 1698
Titcomb, H. B., 74
Tobey, B. C., 1701
Tollerton, W. J., 1378, 1408
Tutan, G. W., 463

Vissering, Harry, 1159
Voight, A. E., 579

Walker, Roberts, 21
Watkins, T. H., 1283
Wendt, Edwin F., 1160
Weston, Edgar W., 417
Whitenton, W. M., 511
Whyte, F. M., 107
Wiechardt, A. J., 1051
Winterrowd, W. H., 1173, 1229
Wise, Marion J., 1647
Wollner, William S., 583
Woodbridge, J. Lester, 1406
Woodward, E. L., 63
Wright, Paul, 312



GENERAL INDEX

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

A

Abandoned Lines During 1921, 147*
 Ability of Carrier to Pay, 460†
 Academy of Political Science: Meeting, 951†
 Accidents (See also Safety First):
 Atlanta, Birmingham & Atlantic at Union City, 751
 Atlanta, Birmingham & Atlantic near Manchester, 887
 Atchison, Topeka & Santa Fe Trains Collide, 1351
 Automobiles at Crossings, 1351, 1497, 1749
 Baltimore & Ohio near Noble, 347
 Chicago, Rock Island & Pacific near Plains, Kan., 1319†, 1332
 Frozen Signals in England, 1086
 I. C. C. Bulletin No. 80, 242; No. 81, 936
 I. C. C. Investigations—Quarterly, 1343, 1463†, 1483, 1712†
 Lehigh Valley Black Diamond Express Derailed, 1176*, 1206†
 London & North Western, 450
 Louisville & Nashville near Flomanton, 1747
 New York Central at Painesville, 555†, 585
 Oregon-Washington Railroad & Navigation Company at Celilo, 1031*
 Pennsylvania near Halifax, Pa., 887
 Pennsylvania Railroad Employees, 1033
 Pennsylvania Railroad Locomotive, 442
 Philadelphia & Reading near Woodmont (Bryn Athyn), 168†, 173, 357, 490, 549, 840 (Conductor and Engineman Imprisoned), 1351 (Pardoned)
 Save Minutes Safely, 1319†
 Summary of Year 1921, 825, 903†
 Texas & Pacific at Camps, 357†, 374
 Texas & Pacific near Mineola, 1747
 Accounting (See also Railway Accounting Officers Association):
 Auditor, Opportunities of the, 1746
 Classification of Material, 1575†, 1598
 Classification of Operating Expenses, Proposed Revision of, 1466†, 1473
 Cost of Treating Ties Charged to Maintenance, 416, 1003†, 1160†
 Depreciation, Charging, 1745
 Division; N. Y., N. H. & H., 341*, 435*
 Gasoline; Missouri Pacific, 1600
 Knowledge, Improve Your, 1711†
 Mandatory Rules, 58
 Material, 1652*
 Settlements with Railroad Administration, 378
 Traveling Auditor, Recognition of the, 239
 Accounts with the Railroad Administration, 39*, 191
 Acetylene Torch for Welding, 704*
 Activity in New Construction in 1921, 149*
 Acworth, Sir William M.: Can the Railroads Earn a Fair Return? 259†, 261, 558†, 811†, 1051†
 Additional Trackage Needed, 99†
 Adhesion and Rack Locomotive for Sumatra, 263*
 Adjuster, Automatic Brake Slack, 1540
 Adjustment Board (See Regional)
 Adjustment, Wage, A Much Needed, 307†
 Administration, Railroad (See United States)
 Administration Trying to Prevent Labor Conflict, 196, 232, 243, 257†, 755
 Advertising:
 Central of Georgia, 857†, 889
 Illinois Central Advertisises Safety, 888
 Public Relations Work, 953†, 954†
 "Selling" the Railroads, 410†, 457†, 505†, 553†, 723†, 807†, 901†, 953†, 954†, 1155†, 1162†
 Space for Sale; Pennsylvania, 347
 Aeronautics, Legislation to Regulate, 491
 Africa: Railroad Notes, 449, 1251
 After Highways are Pounded to Pieces, 480
 Aftermath of Federal Control, The, 1169
 Agent, Station, A Plea for the, 1054†
 Agents as Railway Spokesmen, 725†
 Agricultural Conference:
 President Discusses Transportation, 276
 Rate Reduction Asked, 317
 Agricultural Inquiry, Report of Joint Commission of, 967, 1000†, 1015, 1112, 1346, 1480
 Agricultural Rate Reduction, Maine Roads Not Included in, 295
 Agriculture, Relation of Freight Rates to, 967
 Air Brake (See also Brake)
 Air Brake and Train Operation, The, 765†
 Air Brake Association: Annual Convention, 1544†, 1603*, 1681, 1685†, 1707*
 Air Brake Compound, Galena, 1402
 Air Brake Tests and English Vacuum Brake Tests Compared, 810†, 823*
 Air Brake Retaining Valve, Clark, 1428
 Air Brake Wastes, 1604, 1685†
 Air Compressor, Dual Flow, 485*
 Air Compressor, Westinghouse 3 V.S., 1682*
 Air Mail Service in 1921, 195, 929
 Air-Operated Auxiliary Devices, 1681
 Air Pump Strainer, 1623*
 Air Reduction Sales Company Acquires Davis-Bournville Company, 849
 Air Separator, Thor, 1618
 Aishton, R. H.: Efficiency of Operation, 193

Akron, Canton & Youngstown: Locomotives, Rebuilt—Operating Results, 407†, 423*
 Alarm, Low Water, 1618*, 1621*
 Alaska Railroad:
 American Railway Express Business, 1189
 Completing the Line, 813*
 All in a Day's Work, 656
 All That Glitters Is Not Gold, 212†
 Allegheny Steel Co.: Journal Box Lid, 1397*
 Allis-Chalmers Company: Annual Report, 1041
 Alloy Steels for Locomotives, 257†
 All-Steel or Composite Car, 1432†
 Amendment (See Transportation Act; also Valuation of Railways)
 American Aid for Foreign Railways, 766†
 American Arch Co.: Double Sectional Arch, 1565*
 American Bankers' Association: Public Opinion, William Sproule on, 535
 American Brake Shoe and Foundry Company: Annual Report, 894
 American Car & Foundry Company: Valves, Tank Car, 1429*
 American Connector, 361†, 375*, 906†, 1398
 American Engineering Council: Hoover, Herbert, on Electrification, 242
 American Engineering Standards Committee, 347, 796, 1345 (Highway Signals)
 American Farm Bureau Federation: Tractive Power and Car Capacity, 507†
 American Hose Connectors, Changes in, 375*
 American Iron and Steel Institute: Rail Production in 1921, 970
 American Locomotive Company:
 Annual Report, 547
 Mountain and Santa Fe Types for Manila Railroad, 387*
 Mountain Type; Union Pacific, 1325*
 American Railway Association (See also Car Service Division):
 Automatic Stop Order, Objections to, 783, 859†
 Careful Crossing Campaign, 1302, 1464†
 Coal in Stock, 1748
 Directors, Additional, 394
 Division V—Mechanical:
 Canadian Night, 1404†
 Chairman W. J. Tollerton's Address, 1404†, 1405†, 1408*
 Chairman W. J. Tollerton on Work of the Mechanical Division, 1592†
 Committees, A Suggestion to, 1577†
 Corrosion of Steel Cars, 1403†
 Death of Members, 1422
 Discussion of Reports, 1403†, 1431†
 Life Members, 1420
 Manual, 1303, 1586
 Mayor Bader's Address, 1407
 Next Year's Convention, 1578†
 Officers Elected, 1602
 Officers, One-Year Term for, 1683†
 Power Brake Investigation, I. C. C., 797
 Proceedings, 1403†, 1404†, 1407*, 1431†, 1435*, 1543†, 1575†, 1577†, 1581*, 1631*, 1687*
 Railroad Labor Board Members at Conventions, 1393
 Registration, 1393, 1420, 1421, 1456, 1457, 1552, 1561, 1611, 1678, 1686, 1705
 Report of Arbitration Committee, 1437*, 1438, 1543†
 Report of General Committee, 1410
 Report on Design and Maintenance of Locomotive Boilers, 1687*
 Report on Feed Water Heaters for Locomotives, 1639
 Report on Loading Rules, 1446*
 Report on Locomotive Construction, 1631
 Report on Locomotive Headlights and Classification Lamps, 1575†, 1581*, 1677
 Report on Manual, 1586
 Report on Modernization of Stationary Boiler Plants, 1629†, 1641*
 Report on Nominations, 1412
 Report on Prices for Labor and Materials, 1433†, 1435
 Report on Safety Appliances, 1420
 Report on Scheduling Equipment Through Repair Shops, 1403†, 1412*
 Report on Specifications and Tests for Materials, 1576†, 1577†, 1586, 1686†
 Report on Tank Cars, 1441
 Report on Train Brake and Signal Equipment, 1543†
 Report on Train Lighting and Equipment, 1432†, 1450*
 Rules of Interchange, Recommended Changes in, 1437*, 1438
 Salinas, Leon, at Convention, 1457
 Subjects, Mechanical Department, 1543†
 Tank Car Specifications, Effective Date of, 981
 Tribute to A. W. Gibbs, 1410
 Tribute to F. F. Gaines, 1580
 Work of, 1545†, 1547, 1592
 Young Men, Make Room for the, 1431†, 1547, 1592
 Division VI—Purchases and Stores:
 Address by Elisha Lee, 1593
 Murphy, J. P., Resignation of, 1704

American Railway Association (Continued):
 Officers, Election of, 1704
 Proceedings, 1575†, 1593*, 1647*, 1683†, 1697*
 Registration, 1613, 1678, 1686, 1705
 Report of Committee on Resolutions, 1704
 Report of Fuel Conservation Joint Committee, 1703
 Report of General Committee, 1596
 Report of Memorial Committee, 1704
 Report on Classification of Material, 1575†, 1598
 Report on Distribution and Accounting for Gasoline, 1600
 Report on Economies in the Stationery Store, 1701
 Report on Educating Employees, 1703
 Report on Forest Products, 1697
 Report on Inventory, 1654
 Report on Material Accounting, 1652*
 Report on Need of a Sinking Fund, 1697
 Report on Office Organization, 1698
 Report on Purchasing Agents' Office Records, 1674*
 Report on Reclamation of Material, 1657*, 1684†
 Report on Scrap Classification, 1665*
 Report on Stores Department Book of Rules, 1596
 Report on Supply Train Operation, 1670*
 Report on Unit Filing of Materials and Numerical Numbering System, 1673
 Engineering Division (See American Railway Engineering Association)
 Freight Claim Division:
 Cut Loss and Damage in Half, 55*
 Live Stock Claim Prevention, 348
 Payments for Three Months, 587; Year, 1921, 1034
 Interchange Practice, Recommends New, 985
 Opportunity for, An., 860†
 Perfect Package Campaign, 222, 295
 Rail, Study of Wear on, 1206†
 Safety Section Holds Meeting, 1131
 Signal Section:
 Committee on Conservation, 595†
 Meeting, Annual, 1479, 1733, 1754
 Meeting, March Stated, 595†, 600*, 646*
 Registration, 615, 663
 Report on Batteries, 609*
 Report on Contracts, 655*
 Report on D. C. Automatic Block Signaling, 606*
 Report on D. C. Relays, 612*
 Report on D. C. Track Circuits, 650*
 Report on Economics, 623†, 646
 Report on Electrical Testing, 623†, 647*
 Report on Highway Crossing Protection, 595†, 604*
 Report on Maintenance Rules, 601*
 Report on Mechanical Interlocking, 653*
 Report on Power Interlocking, 595†, 613*
 Report on Signaling Practice, 600*
 Report on Specifications for Oils, 610*
 Report on Standard Designs, 608*
 Report on Valuation, 649*
 Standard Highway Signals, 949†, 1345
 Telegraph and Telephone Section:
 March Meeting, 765†, 775
 Pole Lines, Permanency of, 951†
 Traffic Division—Standing Committees, 585
 Transportation Division:
 Gormley, M. J., on Car Service Rules, 1000†, 1007
 Meeting in Chicago, 1033
 Robbins, Col. F. G., on Preparing for Heavier Business, 1024.
 American Railway Development Association: Annual Convention, 1177*
 American Railway Engineering Association:
 Address of President Downs, 623†, 626*
 Aishton, R. H., on Responsibility of, 598, 624†
 Annual Convention (See also Proceedings under this head), 458†
 Annual Dinner, 698
 Bulletins, An Improvement in the, 668†
 Committee Personnel, 708†
 Downs, L. A., Presiding Officer, 707†
 Fairbairn, J. M. R., Presentation to, 645*
 Fritch, E. H., Letter from Russia to, 656
 Hotel Facilities for Convention, 667†, 707†
 Officers, New, 700*
 Proceedings, 623†, 626*, 667†, 668†, 670*, 707†, 708†, 709*
 Registration, 659, 701, 708
 Report on Ballast, 631*
 Report on Buildings, 711*
 Report on Economics of Railway Labor, 642*
 Report on Economics of Railway Location, 688
 Report on Economics of Railway Operation, 709*
 Report on Electricity, 696*
 Report on Mascnry, 715*
 Report on Rail, 712*, 808†, 828
 Report on Records and Accounts, 686*
 Report on Roadway, 682*
 Report on Rules and Organization, 721*

GENERAL INDEX—Continued

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

- American Railway Eng. Assn. (Continued):
 Report on Shops and Locomotive Terminals, 678*
 Report on Signals and Interlocking, 636*
 Report on Signs, Fences and Crossings, 667†, 693*
 Report on Standardization, 637*
 Report on Stresses in Track, 641
 Report on Ties, 623†, 639*
 Report on Track, 671*
 Report on Uniform General Contract forms, 687*
 Report on Water Service, 667†, 689*, 765†
 Report on Wood Preservation, 717*
 Report on Wooden Bridges and Trestles, 719*
 Report on Yards and Terminals, 628*
 Specification for Rails, 808†, 828
 Specifications for Steel Railway Bridges, 309†
 Tribute to John F. Wallace and George H. Webb, 668†, 670*
 What the Association Is Doing, 599
- American Railway Express Company:
 Alaska Railroad, 1189
 New Rules for Employees, 523
 Perfect Package Campaign, 222, 295
- American Railway Master Mechanics' Association
 (See American Railway Association, Division V.)
- American Railway Men in Asia, 312†
- American Short Line Railroad Association:
 Annual Meeting, 1029
- American Society of Civil Engineers:
 Annual Meeting, 243, 266
 Nominations, 1747
 Specifications for Steel Railway Bridges, 309†, 1100†
- American Society of Mechanical Engineers:
 Locomotive Design, 909
 Railroad Division Elects Officers, 195
 Refrigerator Cars, 1173*, 1229*
- American Steel Foundries: Annual Report, 849
- American Train Control Corporation: Hendrick, C. W., Before I. C. C., 927
- American Train Dispatchers' Association: Luhrsen, J. G., Scores Hoover Conferences, 243
- American Welding Society, The, 1557
- American Wood Preservers' Association:
 Annual Convention, 258†, 269*
 Cost of Treating Ties Charged to Maintenance, 416, 1003†, 1160†
 Creosoted Trestles on the Santa Fe, 369*
 Tropics for Our Tie Supply, 743*
- "Amicita"—Monument to Brazil, 1355*
- Ammunition for Lauck and Plumb, 411†
- Analysis, A. Water, 1168
- Analysis of Railroad Problem, An, 1011*
- Analysis of Railway Statistics for 1921, An, 119*
- Ananias Class, Enlarging the, 1208†
- Anderson, I. F., Before Senate Committee, 290
- Anderson, Sydney (See Joint Commission)
- Annual Reports and Publicity, 901†, 1157†
- Annual Reports (See also names of companies; also Bureau)
- Annular Disc Boiler Check, 1616*
- Anthraxite Shipments in December, 245; January, 447; February, 756; March, 938
- Anti-Burglar Car Door Fastener, 1014*
- Appliances, Education in Use of, 953†
- Apprentices, Special, 1578†, 1629†, 1685†
- Apprentices, Suggestions as to, 1371†
- Appropriations, I. C. C., 291
- Arbitration Committee A. R. A. Mechanical Division, Report of, 1438*, 1543†
- Arch, Double Sectional, 1565*
- Argentina:
 Bridge Contracts, 1142
 Railroad Notes, 799, 940, 1193, 1751, 1752
 Railway Situation, 113
 Rates Increased, 249
- Arkansas, New Line Chartered in, 1248
- Articulated Dining Car, 52
- Artificial Ice Plant at Ogden, 533*
- Asco Journal Box Lid, 1397*
- Ash Pitts, Report of A. R. E. A. on, 678
- Ashton Valve Company: Master Pressure and Master Pilot Gages, 1401
- Asia, American Railway Men in, 312†
- Associated General Contractors: Denny, C. E., Predicts Revival, 242
- Associated Railroads of New Jersey: Appeal for Repeal of Full Crew Law, 442
- Associated Traffic Clubs of America, 1192
- Association of Railway Claim Agents: Officers, 1248
- Association of Railway Electrical Engineers:
 Meeting, Semi-Annual, 1609*
- Association of Railway Executives:
 Cuyler, Thomas De Witt, on Effect of National Agreements, 467, 524
 Labor Conferences, Hoover, 196, 232, 243, 257†, 258†
 Negotiations Between Railways and Train Service Brotherhoods, 258†, 293
- Association's Opportunity for Service, The, 598*
- Atchison, Topeka & Santa Fe:
 Annual Report, 1300*
 Collision of Trains, 1351
 Creosoted Trestles, The Story of, 369*
 Land Development in Kansas, 396
 Money for Improvements, 357†, 395
 Rubber Battery Jars for Car Lighting, 554†, 579*
- Atchison, Topeka & Santa Fe (Continued):
 Solicitation of Business, 751
 Storey, W. B., on Railroad Growth, 928
- Atkins Metal Band Saw, 1402
- Atlanta, Birmingham & Atlantic:
 Derailment at Union City, Ga., 751
 Derailment near Manchester, Ga., 887
 Employee Sentenced to Life Imprisonment for Burning Bridge, 1747
 Valuation, Oral Argument on, 1189
- Atlantic City as a Winter Resort, 447
- Atlantic Coast Line: Locomotive Repairs, I. C. C. Report on Contract for, 858†, 867
- Attacking the "Recapture" Provision, 952†
- Audible Signal, Federal, 517*
- Auditor, Opportunities of the, 1746
- Auditor, Traveling, Recognition of, 239, 1054†
- Australia:
 Government Railways Lose Heavily, 758
 Railroad Notes, 204, 499, 847, 1037
 Unification of Railway Gages, 107*, 450, 1037
 State Railways' Deficits, 450
- Austria: Railroad Notes, 891
- Automatic Block (See Signaling)
- Automatic Brake Slack Adjuster, 1540
- Automatic Connector, American, 361†, 375*, 906†, 1398 (Bracket for)
- Automatic Connectors, Standardization of, 906†
- Automatic Lubricator, Type B, 1619*
- Automatic Protector for Controllers, 703
- Automatic Substations; Oregon Electric Ry., 347
- Automatic Stop (See Automatic Train Control)
- Automatic Train Control:
 Committee, 442, 537
 Definitions, Functions, Requirements, etc., 191
 Electrical Men, 1575†
 Finnigan, 580*, 972
 G. R. S. Company's Auto-manual, 521*
 Great Central (England), 545*
 Interstate Commerce Commission Order, 189, 211†, 279, 308†, 312†, 357†, 408†, 443 (Hearing), 767†, 783, 787, 837, 859†, 927, 971*, 1714†, 1739 (Order Permanent)
- Interpreting Specifications, 408†
- "M-V All Weather," 185*
- New York, Number of Stops in, 395
- No Particular Type Endorsed by I. C. C., 443
- Objections of Railroads, 787, 837
- Objections of A. R. A. Committee, 783
- Otis, 1626
- Permissive Feature, Why Eliminate, 859†
- Progress in, 1001†
- Regan Train Control, 195, 442, 973
- Sprague System; N. Y. C., 963*
- Use on American Railroads, 279
- Webb; Tests on Erie, 175*
- Automobiles:
 Accidents at Crossings, 1351, 1497, 1749
 Crossing Laws, 1047†, 1082 (Virginia), 1192, 1206† (Tennessee), 1266†, 1747
 Durant, Shipments of, 339*, 748*
 Lehigh Valley Black Diamond Express Derailled, 1176*, 1206†
 Shipments, Heavy, 1192
 Tail Lights, Red, 166†, 362†, 1053†, 1345
- Auxiliary Devices, Air-Operated, 1681
- Average Life of Ties, Determining, 779*
- Average Service Life of Signal Units, 649
- Avoid Damage Claims, 1464†
- B**
- Babson, Roger W., on Civil Engineers, 1209†
- Background of Conditions During 1921, 5
- Bad Order (See Car Service)
- Baggage Transfer Rates Reduced in New York City, 938
- Baggage, Valuation of; S. P., 446
- Baker, R. & I. Company: Electric Trucks and Tractors, 1394*
- Balancing Car Movement, 1048†
- Baldwin Locomotive Works:
 American Locomotives in Roumania, 1205†
 Annual Report, 452
 "Prosperity Special," The, 1277*, 1352, 1553*, 1579†
 Santa Fe Type; S. P., 1553*
 Vanclain, S. M., Interview with, 911*
- Ballast, A. R. E. A., Report on, 631*
- Balling of Track by Contract, 674
- Baltimore & Ohio:
 Accident near Noble, Ill., 347
 Divisions Consolidated, 242
- Bangor & Aroostook: Barco Feedwater Connections, 1070*
- Bank Combine, Denies Railroads Controlled by, 1339, 1726
- Bar, Unit Safety, 1710
- Barco Flexible Metallic Connections, 1070*
- Barco Reverse Gear, 1624*
- Barco Steam Heat Connections, 1396*
- Bascule Bridge at Detroit; Wabash, 407†, 414*
- Base, Track Jack, 706*
- Basford, George M., on the Power of the Railroad Club, 1549, 1577†
- Battery, Edison Car Lighting, 1460*
- Battery, 15 Cells of, 1406†
- Battery Jars, Storage; A. T. & S. Fe, 554†, 579*
- Battery Jars, Ruber, Specifications for, 609*
- Battery, Sediment Measure for, 1566
- Battle of the Brakes, The, 810†, 823*
- Bean, W. L.: Motor Cars on the New Haven, 474
- Bearing, Howell Motor, 1571
- Bearing, Stafford Roller, 1460*
- Bearings, Roller, for Car Trucks, 1432†
- Belgium:
 Market for American Ties, 1087
 Railway Situation, 96
- Belts, Data on Body Hung Generators, 1452
- Benguela Railway, Extending the, 449
- Bentley, H. T., on Welding Materials, 1557
- Berwick Two-Path Electric Heater, 1398*
- Besler, W. G.:
 Dinner in Honor of, 879*
 Government's Use of Jersey Central Locomotives, 443
- Bessemer & Lake Erie: Converting a Tunnel Into an Open Cut, 1275*
- Best Accident Record, 825, 903†
- Bethlehem Steel Corporation:
 Annual Report, 850
 Lackawanna Steel Company Purchased, 1196
- Better Railroad Conditions, How to, 6
- Bid, The Lowest, 510†
- Bierd, W. G., Opposes Regional Board of Adjustment, 220
- Bikle, H. W.: Rate Testimony, 573
- Bill of Lading Cases, 447
- Bill (See Legislation)
- Billingsley, P. L. Co.: Flexway Woodworking Machine, 1400*
- Bills, States' Rights, 845
- Bismarck Bridge Pier, Shifting of; Northern Pacific, 1333*
- Black Diamond Express Derailled; L. V., 1176*, 1206†
- Blackall Ratchet Hand Brake, 1396*
- Block Signaling (See Signaling)
- Blower, Coppus Propeller, 784*
- Board of Economics and Engineering:
 Plan for Unified Terminals at Chicago, 1179*
 Testimony of Members Before I. C. C., 481
- Boards of Adjustment (See Regional)
- Boiler (See Locomotive)
- Boiler Plants, Stationary, 1629†, 1641*
- Boiler Plates, Large Size, 1620
- Boiler Tube Practice, 1678
- Boiler Waters, Interior Treatment of, 313†, 364†, 412†, 768†, 794, 907†
- Bolivia: Railway Situation, 114
- Bolster, Wrought Steel Truck, 1565*
- Boltless Truck Column, Bradford, 1428
- Booster, Locomotive, 1571*
- Boring Machine, Universal Horizontal, 1568
- Boring Mill, Colburn, 1567
- Borsig, A.: Unaflo Locomotive, 1727*
- Boston & Albany:
 New England Division Order, 765†, 798, 845
 Signal, Federal Audible, 517*, 558†
 Subway at Springfield, 1358
- Boston & Maine:
 Annual Report, 917
 Valuation, 974
- Box (See Journal; also Driving)
- Bracket for Automatic Connector, 1398
- Bradford Boltless Truck Column, 1428
- Brake, Air (See Air Brake)
- Brake Attachment, Universal Hand, 1461*
- Brake Beam Strut, Buffalo, 1542*
- Brake, Blackall Ratchet Hand, 1396*
- Brake Cylinder Packing Cup, Wabco, 1461*
- Brake, Hand, Safety Attachment for, 1459
- Brake, Peacock Geared Hand, 1425*
- Brake Shoe Key, Buffalo Safety, 1542*
- Brake Shoe Key, Self-Locking, 1540*
- Brake Slack Adjuster, Automatic, 1540
- Brake Tests, English Vacuum, 810†, 823*
- Brake, U.C., 1682
- Brakes, Power, I. C. C. Hearing on, 751, 797, 840, 1213, 1332
- Branch Passenger Service, Common Sense in, 1104†
- Brazil:
 American Monument, 1355*
 Electrification, 204
 Railway Situation, 114*
- Brewster, Morris, Inc.: Packing, 1626
- Bridge Slabs Waterproofed Before Erection; P. & R., 873*
- Bridges and Buildings:
 Bascule Bridge at Detroit, 407†, 414*
 Canadian Pacific Bridge Over St. John River, 1175*
 Cincinnati Southern Bridge, 1209†, 1215*
 Commissary Building; S. P., 347
 Cooper Loading, 1463†
 Favorable Time for Contracting of Work, 212†
 New York Central Castleton Bridge, 1157†, 1197, 1246*
 Philadelphia & Reading Bridge in Reading, 873*
 Piling, Creosoted Cypress; C. B. & O., 730*
 Report of A. R. E. A. on, 711*, 719*
 Shifting of Bridge Pier Stopped; Northern Pacific, 1333*
 Specifications for Steel Railway Bridges, 309†, 634*, 1100†
 Wooden Bridges and Trestles, 719*
- Brigham D. S.: Rate Testimony, 192
- Brill Renitent Window Post, 1397*
- Bringing the Best Out of Men, 510†
- British (See Great Britain)

British Institute of Transport: Motor and Inland Water Versus Rail Transport, 1266†, 1271
 Broad View of Locomotive Improvements, A, 807†
 Brotherhood of Locomotive Engineers: Coal Lands Bought, 1748
 Brotherhood of Locomotive Firemen and Enginemen Condemns President Harding, 1497
 Brubaker Spiral Fluted Tap, 1623*
 Bryn Athyn Collision, 168†, 173, 357†, 490, 549, 840, 1351
 Bucyrus Company:
 Annual Report, 760
 Shovel with Caterpillar Traction, 1430*
 Buda Unit Power Plant, 703*
 Buffalo & Susquehanna Cited to Appear Before Labor Board, 741
 Buffalo Forged Reversible Brake Beam Strut and Safety Brake Shoe Key, 1542*
 Buffer, Type D Radial, 1620
 Buffing Mechanism, Top Vestibule, 1459*
 Buffalo, Rochester & Pittsburgh:
 Annual Report, 969, 996
 Cash Awards for Suggestions, 506†, 540
 Buildings (See Bridges and Buildings)
 Bull Ring, Rogatchoff Piston, 1625*
 "Bull's Eye," The Railroad, 1013*
 Bullseye Dust Guards, 1459
 Burchmore, J. S., Before Labor Board, 1079
 Bureau of Accounts, I. C. C.:
 Annual Report, 194
 Revision of Operating Expense Classification, 1466†, 1473
 Bureau of Foreign and Domestic Commerce:
 Feiker, F. M., to Continue with, 292
 Industrial Machinery Division's Services, 115*
 Bureau of Labor: Cost of Living, Wages and Rates, 358†, 413
 Bureau of Locomotive Inspection, Report of, 331*
 Bureau of Railway Economics: Ratios of Operation, 19
 Bureau of Safety (See Interstate Commerce Commission—Accident)
 Bureau of Statistics, I. C. C.:
 Annual Report, 194
 Seasonal Variation of Operating Income, 273*
 Trend of Freight Traffic, 226*
 Bureau of Traffic I. C. C.: Annual Report, 235
 Bureaus, I. C. C., Further Reports of, 234
 Burma, Meter Gage Mallets for, 847*
 Burnham Car Repair Company: Labor Board's Decision on Indiana Harbor Belt's Contracts, 1111, 1158†
 Business (See also Freight Car Loadings):
 Confidence in the Future, 1157†
 Government and Business, 699
 Locomotive Ownership, 471
 Orders for Equipment in 1922, 163†, 211†, 357†, 506†, 857†, 905†, 1048†, 1267† (Five Months)
 Outlook Continues to Grow Brighter, 357*
 Prepare for Heavier Business, 1024
 R. B. A. Dinner, 343
 Revival, Car Loading Shows, 1206†
 Solicitation Campaign; A. T. & S. Fe, 751
 Business Handicaps of Railway Car Shop, 529*
 Buying Paint, 458†, 952†, 1000†, 1101†
 Buying Tools on Price Basis, 1266†
 Buying with Savings Produced, 707†
 Byram, H. E.: Rate Testimony, 228

C

Cab Signals, European Experience with, 926
 Cab Ventilating Unit, Sturtevant, 1074*
 Caille-Potonie Feedwater Heater, 263*
 California Electric Railway Association: "After Highways are Founded to Pieces—What?" 480
 Campbell, Commissioner, Before Senate Committee, 184
 Camps Collision, 357†, 374
 Canada:
 Government Ownership, D. B. Hanna on, 1065
 Political Situation and Railway Policy, 1297
 Problem of the Government Railways, W. T. Jackman on, 555†, 567*, 735*
 Railroad Construction in 1921, 154*
 Railways Are in a Bad Way, 70*
 Toronto Electrification Disapproved, 286
 Canadian National Railways: Hanna, D. B., on Government Ownership, 1065
 Canadian Pacific:
 Annual Report, 835*, 853
 Bridge Over St. John River, 1175
 Memorial at Montreal, 1249*
 Memorial in New York, 984
 Peacock Geared Hand Brake, 1425*
 Sleeping Cars, 291
 Can the Railroads Earn a Fair Return, Sir W. M. Ackworth on, 259†, 261, 558†, 811†, 1051†
 Cantilever Bridge at St. John, N. B., 1175*
 Capital Needed, W. J. Lauck on, 961†
 Capper Bill, 183, 368, 396
 Car: Brake (See Brake)
 Buffing Mechanism, Top Vestibule, 1459*
 Composite or All-Steel, 1432†
 Connections, Barco Steam Heat, 1396*
 Connector, American, 361†, 375*, 906†, 1398
 Connector, Futrell Train Line, 1536*
 Connector, Robinson, 157*
 Corrosion of Steel Cars, 1403†
 Coupler, Swivel Butt, 1395*

Coupler, Universal, 440*
 Coupling Devices, 1429
 Door Controller, Sliding, 1462
 Door Fastener, Anti-Burglar, 1014*
 Draft Attachments, Farlow, 1536*
 Exports (See Foreign Trade)
 Friction Draft Gear, Hall, 1128*
 Friction Draft Gear, Maintenance of, 1372†
 Journal Box, 1616*
 Lighting (See Lighting)
 Lumber, Treated, 271
 Motor (See Motor Cars)
 Multiple Unit; N. Y., N. H. & H., 1477*
 Orders in 1922, 163†, 211†, 357†, 506†, 857†, 905†, 1048†, 1267† (First Five Months)
 Orders in 1921, 127*, 131*
 Passenger Cars, Rough-Riding, 908†, 954†
 Pennsylvania's Order for 250 Cars, 857†
 Plush Renovator, Chase, 1430
 Prices, 44
 Refrigerator Cars, Notes on, 1173*, 1229*
 Repair Schedule, 1413*
 Repair Work, 1371†
 Repairs, Deferred Cost of, 215†
 Roof, Sharon Pressed Steel, 1129*
 Roof Sheets, Reclaiming, 275*
 Sleeping; Canadian Pacific, 291
 Sleeping Cars Criticized, 363†
 Sleeping Cars in Europe, 1143
 Sleeping Third Class, in Germany, 399*
 Steel Cars, Harris Bill on, 981
 Tank, Report on, 1441
 Truck, Side Frame, Wrought Steel, 1426*
 Truck, Stafford Rolling Bearing, 1460*
 Trucks, Roller Bearings for, 1432†
 Types Introduced in 1921, 51*
 Vapor System, 1541*
 Wheel Grinding, 1156†
 Wheels, Record of Carnegie, 1462
 Window Post, Brill Remitent, 1397*
 Windows, Weather Stripping for, 1542
 Car Capacity and Tractive Power, 507†
 Car Department, Education in the, 223, 512†, 1270†
 Car Foremen's Association of Chicago: Old Shop Machinery Limits Output, 307†
 Car, Freight:
 Container, Erie Freight Service at New York, 233*
 Cupola, Why the, 357†
 Grain Doors, Standardizing, 166†
 Historic Box Car Wrecked; N. C. & St. L., 490
 Orders in 1921, 127*
 Repair Schedule, 1415*
 Handling (See Car Service)
 Car Loading (See Freight Car Loading)
 Car Service:
 Bad Order Equipment at Beginning and End of Federal Control, 328, 329
 Bad Order Percentages, 950†
 Bad Order Situation, 59*
 Capacity and Tractive Power, 507†
 Coal Car Distribution, I. C. C. to Investigate, 1748
 Interchange Rules, Recommended Changes in, 1437*, 1438
 Loading Rules, Report on, 1446*
 Pooling Plan, Warfield, 481, 508†, 576, 808†, 811† 860†
 Car Service Division, A. R. A.:
 Freight Car Loading (See Freight Car)
 Gormley, M. J., on Car Service Rules and the Movement of Equipment, 1000†, 1007
 Shippers Asked to Co-operate in Car Handling, 866
 Speeding Up Movements at Terminals, 411†
 Car Service Rules Improve Use of Equipment, 1000†, 1007
 Car Service Rules, Principles of, 866
 Car Shop, Railway, Handicaps of, 529*
 Car Shortage (See also Freight Car Loading), 1714†
 Car Situation, Watch the, 1431†
 Car Surplus and Shortage, 1919-1921, 17*
 Car Surplus and Shortage, Weekly Figures of (See Freight Car Loading)
 Carbon Steel Castings, Specifications for, 1588*
 Carborundum Company: Firefrax Cement, 1617
 Care of Oil Lamps, 1712†, 1734
 Careful Crossing Campaign, 1302, 1464†
 Carnegie Steel Company: Record of Wheels, Service, 1462
 Cash Prizes for Ideas, 446, 506†, 540
 Castings, Steel, Specifications for, 1588*
 Castleton Bridge Project; New York Central, 1157†, 1197, 1246*
 Catenary Hanover, 1617
 Caterpillar Shovel, Bucyrus, 1430*
 Causeway, Galveston, 1113*
 Celilo Collision, 1031*
 Cell, Edison "H.W.", 1460*
 Cells of Battery Fifteen, 1406†
 Cement, Firefrax, 1617
 Cement Gun Company, Inc.: Tank, 666*
 Cement Tester, Pittsburgh, 1622*
 Census of Safety Workers, A, 242
 Central Europe, Hope for Normal Railroadings in, 1471
 Central Europe's Greatest Problem, 97*
 Central of Brazil: Electrification, 204
 Central of Georgia:
 Advertising in Newspapers, 857†, 889
 Cogary Cogs, 937
 Engine Terminals at Columbus, Ga., 463*
 Fuel and Locomotive Performance, 479
 Pensions Capitalized, 1248
 Public Invited to Confer, 447

Central of Georgia (Continued):
 Thermic Syphon Tests, 1625
 Winburn, W. A., Circular of, 1049†
 Central of Vermont: Coaling Plant at St. Albans, 705*
 Central Pacific and Southern Pacific Decision Ordering Separation of, 1296, 1354, 1495
 Central Railroad of New Jersey:
 Besler, Pres. W. G., Dinner to, 879*
 Government's Use of Locomotives, 443
 Central Railway Club:
 Essentials of Progressive Motive Power Policy, 177
 What Shop Equipment Means to a Railroad, 745*
 Chain Hoist, Yale Model 20, 1573*
 Chairman Anderson (See Anderson)
 Chamber of Commerce, Altoona, Pa.: Interest of the Employees in Railroad Earning Power, 236
 Chamber of Commerce of the United States:
 Amendment of Transportation Act Opposed, 1248
 Annual Meeting, 1171
 Commissioner General of Transportation Proposed, 273, 345, 389, 424
 Legislation to Regulate Aeronautics, 491
 Railroad Committee, 1560
 Railroad Problem Discussed, 389, 1171
 Chandler, W. H.:
 Cuyler, T. D., on Cost of National Shop Agreement, 467, 524
 Rate Testimony, 319
 Changes in American Hose Connectors, 361†, 375*, 906†
 Chaos (See Railway Chaos)
 Chapman, H. J., Before Senate Committee, 330
 Charging the Cost of Treating Ties to Maintenance, 416, 1003†, 1160†
 Chase Plush Renovator, 1430
 Checking Tonnage Rating, 358†
 Check Your Reclamation Work, 1628†
 Chemical Toilets, 665*
 Chesapeake & Ohio:
 Annual Report, 1735, 1758
 Locomotive Facilities at Clifton Forge, 955*
 Chicago:
 Burlington Building Damaged by Fire, 668†, 669*, 766†, 785*, 840, 902†
 Dinner of Traffic Club, 295
 Exhibit, Permanent Railway Supply, 1159†
 Illinois Central Wins Suit, 887
 Mail Terminal, 513*
 Terminal Plans, 904†, 918, 1179*
 Union Station Plans, 323*, 513*, 554†, 561* (Foundation Tests)
 Chicago & Alton: Bied, W. G., Opposes Regional Board of Adjustment, 220
 Chicago & Eastern Illinois: Receivership Ends, 181*
 Chicago & North Western: Annual Report, 1243, 1256
 Chicago, Burlington & Quincy:
 Annual Report, 1494, 1509
 Clerical Employees' Wages Cut, 740
 Creosoted Cypress Piling, 730*
 Fire Damages Office Building in Chicago, 668†, 669*, 776†, 785*, 840, 902†
 Pension System, 243
 Treatment of Car Lumber, 271
 Chicago Great Western:
 Annual Report, 1027
 Fares Reduced, 446
 Chicago Junction: Acquisition by New York Central, 866, 1244
 Chicago, Milwaukee & St. Paul:
 Annual Report, 1127, 1148
 Application to Acquire C. M. & G., 136
 Clerks' Case Before Labor Board, 822
 Contracts with Japanese Steamship Lines, Refuse to Cancel, 203
 Education in the Car Department, 223
 Effects of Electric Power Used for Traction, 1052†
 Electrical Operation, 833, 1052†
 Officers Fined—Appeal Dismissed, 442
 Chicago, Milwaukee & Gary:
 St. Paul Wants to Acquire, 136
 Chicago Pneumatic Tool Company:
 Dual Flow Air Compressor, 485*
 Little Giant Drill Motors, 1401
 Chicago Railway Equipment Company: Annual Report, 760
 Chicago, Rock Island & Pacific:
 Anniversary Program, 1748
 Collision near Plains, Kan., 1319†, 1332
 Hayden's, Charles, Letter to Stockholders, 357†, 367
 Regan Train Control, Demonstration of, 442
 Scrap Dock at Silvis, Ill., 1665*
 Thrift Month, 242
 Chicago, St. Paul, Minneapolis & Omaha: Annual Report, 1244
 Chicago Traffic Club: Officers Elected, 937
 Chicago Union Station Company: Foundation Tests, 554†, 561*
 Chicago Union Station Plans, 323*, 513*
 Chief Clerks' Position, 462†, 861†
 Chihuahua & Orient, Construction of, 299
 Chile:
 Electrification, 216*, 527*, 990, 1005*
 Line to Argentina Authorized, 799
 Locomotives, Electric Freight, 1005*
 Locomotives, Electric Passenger, 527*
 Railroad Notes, 847
 Railroad Problem and Its Solution, 216*
 Railway Situation, 114
 Visitors to Mechanical Convention, 1556

GENERAL INDEX—Continued

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

- China:
 Clark, F. H., on Railways, 1551
 Dutch Secure Bridge Contracts, 499
 Railroad Notes, 847, 1307
 Railways in 1921, 98*
 Shantung Railway, The, 307†
 Chinese Eastern, Russians Seek to Hold, 249
 Chronological Review, 66*
 Church (See Major Church)
 Cincinnati, Labor Leaders Meet at, 1320†, 1338, 1476
 Cincinnati Southern Bridge, 1209†, 1215*
 Cincinnati, Lawrenceburg & Aurora: Container System, 475*
 Cinder-Separating Induced Draft Fan, 428*
 Civil Engineers as Railway Executives, 1209†
 Claims (See also American Railway Association—Freight Claim Division):
 Co-operation, 360†
 Cutting Loss and Damage in Half, 55*
 Glass Shipments, 1464†
 Live Stock Claim Prevention, 348
 Loss and Damage and Rebating, 257†
 Notice of, Thirty Days, 588, 724†
 Overcharge, Time for Filing, 498
 Payments, 587, 1034 (Year 1921)
 Railroad Administration, Settlements of, 427
 Settlements by Agents; N. Y., N. H. & H., 796
 Clark Equipment Company: Ode on Transportation, Prize for, 840
 Clark, F. H., on Chinese Railways, 1551
 Clark Gasoline Power-Lift Truck, 1568
 Clark Valve, 1428
 Clark's, T. C., Wireless Control, 973
 Class in Consolidations, The, 724†
 Classification of Material, 1575†, 1598
 Classification of Officers, Objection to, 393
 Classification of Operating Expenses, Proposed Revision of, 1466†, 1473
 Classification, Reclamation, 1658*
 Classification, Scrap, 1665*
 Classification Yards, Report of A. R. E. A. on, 630
 Clerk (See Employee)
 Cleveland, Cincinnati, Chicago & St. Louis:
 Motor Coach, Service, 1069*
 Shops Reopened under Contract, 840
 Cleveland Low Water Alarm, 1618*
 Cleveland Motor Car, 920*
 Clifton Forge, Va.: Locomotive Facilities, 955*
 Clover Leaf (See Toledo, St. Louis & Western)
 Coaches, Gasoline Propelled Railway, 1008
 Coal (See also Coal Strike):
 Anthracite Shipments, 245, 447, 756, 938
 B. of L. E. Buys Lands, 1748
 Freight Rate Reductions Urged, 281, 295
 Loadings, 1049†
 Prices, Rates and Miners' Wages, 726†
 Production During Strike, 912, 929, 988, 1035, 1192, 1250
 Production, Monthly, 19*
 Production in 1921, 203
 Stocks on Hand, 397, 1748
 Storage Coal, Report on, 1286
 Storage, Investigating, 1141
 Storage, Rules for, 1755
 Thawing Shed; Pennsylvania, 394
 Coal Car Distribution, I. C. C. to Investigate, 1748
 Coaling Plant at St. Albans, Vt., 705*
 Coaling Plant, Electrically-Operated, 666*
 Coaling Plant, English Locomotive, 544*
 Coalition (See Political)
 Coal Mining Industry, Status of, 1283
 Coal River Collieries, The, 1748
 Coal Strike:
 Called for April 1, 841
 Coal Production During, 912, 929, 988, 1035, 1192, 1250
 Helping Finance the, 857†
 Loadings, 1049†, 1505
 Prices, Trying to Hold Down, 1209†
 Publicity Needed, 1002†, 1104‡
 Railroad Earnings, 1049†
 Rerouting of Traffic, Meeting a, 1711†
 Traffic, Big Cut in, 876
 Watch the Car Situation, 1431†
 Cochran, H. A.: Rate Testimony, 576
 Cochrane-Bly Company: Luther High-Speed Saw Blade, 1569
 Cogary Cogs; Central of Georgia, 937
 Colburn Boring Mill, 1567
 College Men for Railroad Work, 411‡, 511‡, 985, 1578†, 1629†, 1685†
 Collision (See Accidents)
 Colpitts, W. W.: Pooling of Freight Cars, 481
 Columbian Executive to Buy Equipment, 1751
 Columbus, Ga.: Engine Terminal; C. of G., 463*
 Column, Bradford Boltless Truck, 1428
 Column, Edna Water, 1617*
 Commerce Bureau Improves Service to Exporters, 115*
 Commissary Building, Southern Pacific, 347
 Commission (See also Interstate Commerce Commission; also Joint Commission)
 "Commission Declares Its Independence, The," 1282
 Commissioner General of Transportation Proposed, 273, 345, 389, 424
 Committee Plan, The, 1160†
 Commodity Loading by Months, 16
 Common Officers (See Interlocking)
 Common Sense in Buying Paint, 1000†
 Commissioner (See Interstate Commerce Commission)
 Common Sense in French Passenger Service, 1104‡
 Communication Situation, The, 163†
 Compensation (See Employee—Wages)
 Competition, Construction to Meet, 507†
 Composite or All-Steel Car, 1432†
 Compound, Galena Air Brake, 1402
 Compressor, Dual Flow Air, 485*
 Compressor, Westinghouse Air, 1682*
 Concrete:
 Bridge Slabs Waterproofed; P. & R., 873*
 Pipe, Pre-Cast; L. V., 706*
 Poles at Belding; P. M., 664*
 Conditions Affecting Head of a Rail, 237, 293
 Conditions Are Most Favorable, The, 212†
 Conferences, Hoover Labor, 196, 232, 243, 257†, 258†
 Confidence in the Future, 1157†
 Congress (See also Senate; also House):
 Railroad Legislation, 1336
 Report of Joint Commission of Agricultural Inquiry, 967, 1000†, 1015, 1112, 1346, 1480
 Ship Subsidy Bill, 531, 857†, 902†, 1034, 1505, 1738
 States' Rights Bills, 845
 Connections, Barco, 1070*, 1396*
 Connector, American, 361†, 375*, 906‡, 1398 (Bracket for)
 Connector, Futrell Train Line, 1536*
 Connector, Robinson, 157*
 Conservation of Fuel (See Fuel; also International Railway Fuel Association)
 Conservation, Signal Section's Committee on, 595†
 Consolidated Freight Handling Company: Contract with Erie, 347
 Consolidated Machine Tool Corporation, 1560
 Consolidated Purchasing Agency, Short Lines', 1030
 Consolidation Hearings, I. C. C., 792, 1025, 1141, 1731
 Consolidation of Freight Terminals, 477, 862‡
 Consolidations, The Class in, 724†
 Construction, New (See also Bridges and Buildings; also Yards and Terminals):
 Alaska Railroad Completed, 813*
 Converting a Tunnel Into an Open Cut; B. & L. E., 1275*
 Cost of Work, Saving in, 902†
 Denny, C. E., Predicts Revival, 242
 Galveston Causeway, 1113*
 Good Time to Start Work, 596†
 Light Traffic an Aid, 949†, 1270‡
 Mexico, 299, 398
 Mileage Built in 1921, 149*
 Pennsylvania's Entrance Into Detroit, 1711†, 1717*
 Real Program Needed, 357†, 383
 Reasons for Optimism, 596†
 Trend of Railway Construction, 213†
 Construction to Meet Competition, 507†
 Container Cars—Erie Freight Service at New York, 233*
 Container System; Cinn., Low. & Aurora, 475*
 Container System for L. C. L. Freight, 629
 Containers, Unit, B. F. Fitch on, 468
 Contract for Maintenance of Track Awarded to A. S. Hecker Co. by Erie, 215
 Contract Forms, Uniform General, 687*
 Contract System; Phil., Wil. & Balt., 949†, 979
 Contract Versus Railroad Shop, 529*
 Contracting of Bridge Work, Favorable Time for, 212†
 Contracting of Repairs by Indiana Harbor Belt, Labor Board's Decision on, 1111, 1158†
 Contracts for Locomotive Repairs, I. C. C. Reports on, 858†, 867, 1716‡
 Contracts, Shop; M. K. & T., 1080, 1125
 Contracts with Japanese Steamship Lines, Railroads Refuse to Cancel, 203
 Contributors in Annual Review Number, 155
 Control Vapor System, 1541*
 Controller for Turntable Motors, 1625*
 Controller, Sliding Door, 1462
 Controllers, Automatic Protector for, 703
 Convention (See names of associations)
 Cook, Bernard: Wheel Gage, 1539*
 Cooper Loading Obsolete? 1463†
 Co-operation and Freight Claims, 360†
 Co-operation Between I. C. C. and State Commissions, 1076, 1109
 Co-operation Between Railways and Steamships, President Urges, 531
 Co-operative Research Needed, 1404†, 1408
 Co-operative Switching of Joint Tracks Succeeds at Seattle, 1184
 Co-ordination, a Hackneyed Word, 1321†
 Coppus Propeller Blower, 784*
 Corrosion and Pitting of Boiler Tubes, 667†, 690
 Corrosion of Steel Cars, 1403†
 Corrupt Railroad Police, 1319†
 Cost:
 Car Lighting, 408†
 Car Roof Sheets, Reclaiming, 275*
 Coal, 46
 Cross Ties, 269, 270
 Deferred Repairs, 215†
 Delays to Trains, 1265†
 Distribution, Reducing Costs of, 724†
 Economy Possibilities, Every Day, 902†
 Freight Train Speed, 312‡
 Cost (Continued):
 Illinois Central's Operating Costs in Mississippi, 1082
 Knowledge of, 1405†
 Locomotive Operating Results Show Savings by Rebuilt Power, 407†, 423*
 Locomotive Operation, 769†
 Locomotive Repair Contracts, 858†, 867
 Material Costs, Lower, 43*
 National Shop Agreement, 467, 524
 Repairs in New South Wales and the United States, 1087
 Pole Posts, 951†
 Public and Private Operation, 330
 Railroad and Contract Shop, 529*
 Soda Ash for Water Treatment, 412‡
 Telephone Rentals, 506†, 525*
 Terminals, Renewal of, 904†
 Ties, 46
 Train Cost and Maintenance Expenditures, 1405†, 1409
 Travel in Europe, 1213
 Treating Ties Charged to Maintenance, 416, 1003†, 1160‡
 Unified Terminals at Chicago, 1181*
 Unit Cost of Train Operation, 796
 Cost of Living, How to Reduce, 214‡
 Cost of Living, Wages and Rates, 358†, 413
 Coupler, Swivel Butt, 1395*
 Coupler, Universal Car and Hose, 440*
 Coupler Yoke, Forged Steel, 1460*
 Coupler Yoke, Key Connected, 1626*
 Coupling Devices, 1429
 Court Decision on Pennsylvania Controversy with Labor Board, 1021, 1124
 Court News (See Legal Decisions)
 Covington Machine Company: Hose Dismantling and Assembling Machine, 1569
 Craft Incorporated: Lightweight Motor Car, 920*
 Crane, Elwell-Parker Truck with, 980*
 Cranes, Locomotive; Lehigh Valley, 365*
 Crank Planer, Newton, 1570*
 Creosote (See Ties and Timber)
 Cross Crossings Cautiously, 1464†
 Cross Ties (See Ties and Timber)
 Crossing, Eymon Continuous Rail, 663*
 Crossings (See also Highway Crossings):
 Accident at Painesville, 555†, 585
 Automobile Wrecks, 1351, 1497, 1749
 Careful Crossing Campaign, 1302, 1464†
 Laws, 1047†, 1082 (Virginia), 1192, 1206† (Tennessee), 1266†, 1747
 Maintenance of, Reciprocity in, 459†, 812‡
 Protection, Report on, 595†, 604*
 Substitute Highways, 667†, 694
 Cummins, Senator (See Senator Cummins)
 Cupola, Why the, 357†
 Cup Vending Machine, Dixie, 1402*
 Cushing, George H., Urges Reduced Coal Rates, 282
 Cut Out the Knocking, 413‡
 Cutting Down the Cost of Distribution, 724†
 Cutting Freight Loss and Damage in Half, 55*
 Cuyler, T. DeWitt: National Agreements, 467
 Cylinder, Dual Flow Steam, 485*
 Cypress Piling, Crocsted; C., B. & Q., 730*
 Czecho-Slovak Railways, 800
 Czecho-Slovakia, Electrification in, 499

D

Dale Machinery Company:

- Colburn Boring Mill, 1567
 Lassiter-Millholland Staybolt Machine, 1568
 Dallas, Tex., Freight House at; M. K. & T., 559*
 "Danger" Versus "Stop" Sign, 1269‡
 Danzig Railway Repair Shops to Be Internationalized, 1194
 Davis-Bournonville Company Acquired by Air Reduction Sales Co., 849
 Davis, James C. (See Director General)
 Decline in Railway Development, S. O. Dunn on, 229
 Deferring Repairs a Costly Policy, 215‡
 "Deficit," I. C. C. Decision on Meaning of, 741
 Delano, F. A.: Railroad Conditions, 1171
 Delaware & Hudson:
 Annual Report, 1123, 1150
 Life Insurance, Free, 182
 Delaware, Lackawanna & Western:
 Car Door Fastener, 1014*
 Flagman's Pride in Road, 1159†
 Freight Transfer Station to Be Operated under Contract, 796
 Radio Experiments, 828, 888*
 Safety News-Service Posters, 586*
 Delays to Trains, Cost of, 1265†
 Denmark: Railroad Notes, 499
 Denny, C. E., Predicts Railway Construction, 242
 Departmental Organization—The Committee Plan, 1160†
 Derailment (See Accidents)
 Dermody, J. J., Before Senate Committee, 290
 Design, Locomotive, 909
 Design of Locomotive Boilers, 1687*
 Des Moines Register on Railroad Situation, 359†
 D'Esposito, J.: Foundation Tests, 554†, 561*
 Department of Research, 1051‡
 Depreciation, Charging, 1745
 Determining the Average Life of Tires, 779*
 Detroit, Bascule Bridge at; Wabash, 470†, 414*

Detroit Exhaust Nozzle Cover, 1621*
 Detroit, Pennsylvania's Entrance Into, 1711†, 1717*
 Detroit, Toledo & Ironton: Revenues and Expenses in November, 167†; December, 858†; March, 1047†
 Development Association (See American Railway)
 Developments During the Year, 9*
 Devices, Trying New Mechanical, 1431†, 1685†
 Dictator, Word of Suggestion to the, 511†
 Die Head, Williams Reeding, 1569
 Diesel-Electric Motor Cars, 1183*, 1431†
 Diesel Engine Locomotives, 50
 Different Kinds of Block Systems, 1712†
 Differential Between Clerical Positions, 307†
 Differential Fares, New York-Chicago, 159
 Dinsmore, Frank S., Death of, 452*
 Direct Drive for Car Lighting Generators, 1432†, 1450*, 1540*
 Director General Davis:
 Aftermath of Federal Control, The, 1169
 Equipment Trust Agreement, Modification of, 348
 Railroad Administration Liquidation, 427
 Directors, Interlocking, I. C. C. Rulings on, 157, 196, 243, 291, 347, 755, 840, 1033
 Disarming Critics by Frankness, 857†, 889
 Disc Boiler Check Valve, 1616*
 Dispatchers (See Train Dispatchers)
 Distribution, Cutting Down Cost of, 724†
 Distributor Tube, Stoker, 1617*
 Dividend Changes in 1921, 133
 Dispatching (See Train Dispatching)
 Division Accounting; N. Y. N. H. & H., 341*, 435*
 Division V (See American Railway Association)
 Division Superintendent's Interest in Fuel Consumption, A., 1236
 Dixie Cup Vending Machine, 1402*
 Doak, William N.: Relation of Employees and Employers, 266
 Door Controller, Sliding, 1462
 Door Fastener, Car, 1014*
 Door, Shoemaker Radial Fire, 1620*
 Door, Trap, Spring Testing Device, 1710
 Doors, Standardizing Grain, 166†
 Drop Pits, Enginehouse, 1684†
 Double Automatic Control Vapor System, 1541*
 Double Sectional Arch, 1565*
 Double Track and the Standard Code, 459†
 Down, S. G., on South America, 1552
 Downs, L. A., President A. R. E. A., 707†
 Draft Attachments, Farlow, 1536*
 Draft Gear:
 Farlow Attachments, 1536*
 Hall Friction, 1128*
 Lug, Drop Forged, 1618*
 Maintenance of, 1372†
 Sessions-Standard, 1537*
 Drainage, Large Expenditures for, 1009
 Drill Motors, Little Giant, 1401
 Drills, "Pigmy" Type, 1622
 Drive (See Direct Drive)
 Driving Box, Lateral Motion, 1710*
 Driving Box Spreader, 1709*
 Drop Forged Draft Gear Lug, 1618*
 Dual Flow Air Compressor, 485*
 Duncan, C. S.: Testimony Before Senate Committee, 1067, 1117
 Dunn, S. O.:
 Address Before Accounting Officers, 1743
 Ananias Class, Enlarging the, 1208†
 European Railway Service, 1205†, 1211
 International Railway Congress, 1100†, 1105*, 1156†, 1163*
 Motor and Waterway Transport, 1266†, 1271
 Testimony Before I. C. C., 229
 Durant Automobiles, Shipments of, 339*, 748*
 Dust Guards, Bullseye, 1459
 Dutch State Railways:
 Locomotive, Adhesion Rack, 263*
 Dynamometer Car, Use of, 358†
 Dynamometer Tests With and Without Feed Water Heaters, 1236*

E

Earning a Fair Return (See Rate of Return)
 Earning Power, Interest of Employees in, 236
 Earnings (See Revenues and Expenses)
 "East Brookfield on the Map," 558†
 Eastern Managers Meet, 395
 Economical Freight Train Speed, 312†
 Economics of Railway Labor, Report on, 642*
 "Economic Impossibility," Strike for an, 1713†
 Economics of Railway Location, 688
 Economics of Railway Operation, 709
 Economics of Railway Signaling, Report on, 623†, 646, 1733
 Economics of Tie Renewals, 270
 Economies from Better Locomotive Maintenance, 1047†
 Economies in the Stationery Store, 1701
 Economy, Fuel (See Fuel)
 Economy of Modern Work Equipment, 1463†
 Economy Possibilities, Every Day, 902†
 Economy in Painting, 212†
 Edgewater Steel Company: Rolled Wheels, 571*
 Edison "H W" Cell, 1460*
 Edna Water Column, 1617*
 Education:
 Auto Driver, 1206†
 College Men for Railroad Work, 411†, 511†, 985, 1578†, 1629†, 1685†
 Employees of Stores Department, 1703

Education (Continued):

Fuel Economy, 1287
 Juneau, C. G., on, 223, 512†, 1270†
 Locomotive Appliances, Use of, 953†
 Motor Truck Composition, 1269†
 Rea, Samuel, on Value of, 985
 Transportation Institute Proposed, 1346
 Edwards, O. M., Company:
 Sliding Door Controller, 1462
 Trap Door Spring Testing Device, 1710
 Effects of Electric Power Used for Traction, 727*, 1052†
 Efficiency (See also Operating Efficiency):
 Government and Private Operation, 409†
 Stoker Fired Locomotives, 1686†
 Egypt: Railroad Notes, 1193
 Eight-Hour Day and Trainmen, 461†
 Electric Controllers, Protector for, 703
 Electric Headlights (See Headlights)
 Electric Heater, Berwick, 1398*
 Electric Hoist, Standard, 1566*
 Electric Locomotive (See Locomotive)
 Electric Melting Pot, 1569
 Electric Storage Battery Company:
 Miniature Track Circuits, 664*
 Sediment Measures, 1566
 Electric Switching Service; N. Y. N. H. & H., 778
 Electric Traction for Steam Railroads, 335
 Electric Truck (See Trucks)
 Electric Welding (See Welding)
 Electrical Departments, 1543†, 1575†
 Electrical Developments for the Year 1921, 61*
 Electrical Engineers, Meeting of, 1609*
 Electrical Men and Automatic Train Control, 1575†
 Electrical Standardization in England, 590
 Electrical Testing, Report on, 623†, 647*
 Electricity, Report of A. R. E. A. on, 696*
 Electrification:
 Brazil, 204
 Catenary Hanger, 1617
 Chicago, Milwaukee & St. Paul, 833, 1052†
 Chile, 216*, 527* (Passenger Locomotives), 990, 1005* (Freight Locomotives)
 Czechoslovakia, 499
 Europe, Programs in, 61*
 Europe, W. J. Tollerton on, 1404†, 1410
 French Railways, 82, 1307
 Future Locomotive, The, 1004†, 1053†
 Gibbs, George, Report of, 335
 Greek Railways, 298
 Holland, 1086
 Hoover, Herbert, on, 242
 Hungary, 847
 Inductive Interference and Electrolysis, 727*, 1052†
 Italian Railways, 87, 449, 1105
 Japanese Railways, 103*
 London, Brighton & South Coast, 449
 N. Y. N. H. & H. Equipment, 1477*
 Norway, 1307
 Philippines, 204
 President Harding on, 276
 Serbia, 298
 South Africa, 398, 1143
 Swiss Railways, 89
 Toronto Electrification Disapproved, 286
 Electrolysis and Inductive Interference, 727*, 1052†
 Elliott, Howard:
 Chamber of Commerce's Report Opposed, 391
 Railroad Situation, 266
 Elvin Mechanical Stoker Company: Suit of Locomotive Stoker Company Against, 1351
 Elwell-Parker Electric Company:
 Trailer, Wheeled Platform, 1401*
 Trucks, 980*, 1182*
 Emery, E.: Brake Shoe Key, 1540*
 Employee (See also Labor; also Railroad Labor Board) (Continued):
 Besler, W. G., and the C. of N. J., 879*
 Bringing the Best Out, 510†
 Canadian Pacific Memorial, 984, 1249*
 Cash Prizes for Suggestions, 446, 506†, 540
 Clerk, the Chief, 462†, 861†
 Clerks, New Rules for, 174, 277, 292, 308†
 Clerks, Wage Reductions for, 1504, 1719
 Co-operation, 360†
 Education (See Education)
 Election on the Pennsylvania, 1302
 Engineer's Name on Cab; St. L. S. F., 807†
 Engineman Saves Child; Erie, 1264
 Enginemen Sent to Fuel Convention; S. P., 936
 Fined for Theft; N. Y. C., 394
 Flagman's Pride in Road; D. L. & W., 1159†
 Foremen, Developing, 459†
 Foremen, Loyal, Laying Off, 407†
 Foremen, Selecting and Training of, 1371†, 1403†, 1433†, 1544†, 1576†, 1627†, 1684†
 Full Crew Law, Campaign Against, 291, 39, 442, 585, 796, 840, 1133 (Maryland and New Jersey)
 Grand Trunk Rally at Stratford, 1302
 Imprisonment for Responsibility for Collision Near Woodmont; P. & R., 840, 1351 (Pardoned)
 Imprisonment, Life, for Bridge Burning; A. B. & A., 1747
 Insurance, Free Life; D. & H., 182
 Insurance, Group, 1061
 Insurance; Lehigh Valley, 883
 Interest in Railroad Earning Power, 236
 Knocking, Cut Out the, 413†

Employee (See also Labor; also Railroad Labor Board) (Continued):
 Letter, H. L. Hungerford's; Southern, 1034
 Locomotive Engineer Tells How to Improve Operation, A., 861†, 1104†, 1161†, 1323†
 Number and Compensation in September, 242; October, 442; November, 755; December and Year 1921, 888; January, 1033; March, 1465†, 1497
 Number and Compensation in 1920 and 1921, 122
 Overtime, Reducing, 1205†, 1713†
 Pennsylvania Reviewing Committees, 936
 Pennsylvania System Athletic Exhibition, 984
 Pension System; C. B. & Q., 243
 Pensions; Central of Georgia, 1248
 Pullman Porters' Chorus, 1033
 Secretaries, The, 557†
 Selling the Railroads to the Public, 1:62†
 Service Letter Laws Upheld, 1751
 Sleeping in Caboose, 1099†
 Solicitation of Business; A. T. & S. Fe, 751
 Stock, Helping Employees Buy, 307†, 348
 Strikes:
 Coal Miners (See Coal Strike) 841
 Germany, 351, 399
 Threatened Strike, 1320†, 1476, 1713†, 1719
 Western Maryland, 841
 Thefts; New York Central, 394, 796
 Ticket Clerks, Advice to, 400
 Training Men for Promotion, 507†
 Veterans' Association, New England, 812†
 Veterans, New York Central, 244
 Veterans' Reunion; Southern Pacific, 1248
 Wages:
 Ability to Pay, 460†
 British Railways, 78
 Comparisons Between 1916 and 1921, 1208†
 Cost of Living, Reduce the, 214†
 Cost of Living, Wages and Rates, 358†, 413
 Differential Between Clerical Positions, 307†
 Eight-Hour Day, The, 461†
 English Railways, 78, 249
 French Railways, 83
 Joint Commission of Agricultural Inquiry, Reports on, 1112
 M. of W. Employees Before Labor Board, 921, 1268†, 1279, 1320†, 1476
 New Rules for Clerks, 174, 277, 292, 333
 New Rules for Shopmen, 174, 243
 New Rules for Signalmen, 438
 Purchasing Power of, 1720, 1723
 Reductions for Clerks; C. B. & Q., 740
 Reductions in Great Britain, 249, 399
 Reductions Ordered (See Railroad Labor Board)
 Senator La Follette on, 422
 Short Lines' Disputes, 174
 Statistics for 1916 and 1921, 1208†
 Statistics for 1920 and 1921, 122, 888, 1140
 Statistics, Monthly, 122, 242, 442, 755 (December and Year 1921), 888, 1033, 1140, 1465†, 1497 (March)
 Train Service Employees, 258†, 293, 461†
 Winburn, W. A., Circular of, 1049†
 Women's Aid; Pennsylvania, 919*, 1748
 End Valve, Packless, 1399*
 Engine (See also Locomotive):
 Buda Unit Power Plant, 703*
 Diesel, for Motor Cars, 1431†
 Engine Lathe, American, 1567
 Engine Lathe, The Neglected, 766†
 Engineer Can Play a Part, The, 902†
 Engineer, Civil, in Railroad Service, 1209†
 Engineer or Railroad Man? 624†
 Engineering Standardization, Progress in, 347, 796
 Engineer's Knowledge of Accounting, 1711†
 Engineer's Name on Cab; St. L. S. F., 807†
 Enginehouse (See Engine Terminal)
 Engine Terminal:
 Central of Georgia at Columbus, 463*
 Chesapeake & Ohio at Clifton Forge, 955*
 Developments During 1921, 63*
 Drop Pits, 1684†
 Lighting Facilities, 212†
 Locomotive Inspection at, 1684†
 Machine Tools for, 1544†
 Report of A. R. E. A. on, 678*
 Work Specialized, 1576†
 England (See Great Britain)
 English the Railway Language, 1156†
 Enlarging the Ananias Class, 1208†
 Enlarging Another Year of Struggle, 4†
 Equate Costs to Service Rendered, 1683†
 Equipment (See also Car; also Locomotive):
 Bad Order Condition at End of Federal Control, 329
 Cars and Trackage Needed, 999†
 Conditions Show Dangerous Tendency, 59*
 India to Order Annually, 398
 Needs of Railways, 379
 Orders in 1922, 163†, 211†, 357†, 506†, 857†, 905†, 1048†, 1267† (First Five Months)
 Orders in 1921, 124*, 127*, 131*
 Repair Facilities, V. Z. Caracristi on, 745*
 Russia's Railways, 92
 Single Phase; N. Y. N. H. & H., 1477*
 Work Equipment, Modern, 1463†
 Equipment Trust Agreement, Modification of, 348

GENERAL INDEX—Continued

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

Equipment Trust Certificates, Sales of, 254
 Erie:
 Automobile Wrecked at Crossing, 1351
 Contract for Handling Freight, 347
 Contract for Maintenance of Track
 Awarded to A. S. Hecker Co., 215
 Contract with Meadville Company, Labor
 Board to Investigate, 751
 Cotter, J. J., Saves Child, 1264
 Differential Fares, New York-Chicago, 159
 Freight Delivery at New York, 233*, 826
 Shops Leased, 291, 394
 Webb Automatic Train Stop, 175*
 Esch, Commissioner, Before Senate Committee,
 184
 Essentials of Progressive Motive Power Policy,
 177
 Europe (See also names of countries; also
 International Railway Association):
 Cab Signals, Experience with, 926
 Clagett, Brice, on Railroad Situation, 1471*
 Central Europe, Chas in, 97*, 1471*
 Dunn, S. O., on Passenger Service, 1205†,
 1211
 Electrification in, 61*, 1404†, 1410
 Railway Situation in Norway, Sweden, Spain
 and Belgium, 95*
 Sleeping Car Service, 1143, 1205†, 1211
 Tollerton, W. J., on Trip, 1378
 Vauclain, S. M., on Conditions, 546, 911*
 Every-Day Economy Possibilities, 902†
 Example of Reciprocity, An, 812†
 Excess Income, Rules for Recovery of, 334, 796,
 887, 952†
 Excursion and Tourist Rates, 999†
 Excursion and Tourist Services in Great Britain,
 163†, 204, 1265†, 1308
 Executives (See also Association of Railway
 Executives):
 Civil Engineers, 1209†
 President Urges Voluntary Rate Reduction,
 1110, 1227, 1278
 Prospects for 1922, 5
 Strike Threats, 1476
 Exhaust Nozzle Cover, Detroit, 1621*
 Exhibit (See also names of associations):
 Permanent Exhibit in Chicago, A., 1159†
 Railway Supply Manufacturers, 724†, 1371†,
 1380* (List of Exhibitors), 1404†, 1406,
 1456, 1543†, 1577†, 1608, 1630
 Expenditures:
 Northern Pacific in Montana, 1035
 Railways Should Make Vast, 928
 Terminals, Renewal of, 904†
 Union Pacific's Proposed, 929
 Valuation, 348
 Expense Classification, Proposed Revision of
 Operating, 1466†, 1473
 Expenses (See Revenues and Expenses)
 Exporters, Commerce Bureau Improves Service
 to, 115*
 Exports (See Foreign Trade)
 Express Employees, New Rules for, 523
 Extinguisher, Hand Fire, 1622
 Eymon Continuous Rail Crossing, 663*

F

Face the Problem Squarely, 310†
 Factors Affecting the Cost of Treated Cross
 Ties, 269
 Factors in the Business of Owning Locomotives,
 471
 Fairbairn, J. M. R., Presentation to, 645*
 Fairbanks, Morse & Co.: Annual Report, 1042
 Fair Return, Can Railroads Earn a, 259†, 261,
 558†, 811†, 1051†
 "Fair Return" for Railroads and for Ships, 902†
 "Fair Return," Reduction of the, 1267†
 Faithful Are the Wounds of a Friend, 1266†
 Fan, Sturtevant Cinder-Separating, 428*
 Fares (See Passenger Fares)
 Farlow Draft Attachments, 1536*
 Fast Freight Schedules, 48
 Fastener, Car Door, 1014*
 Fatal, If Not Corrected, 1004†
 Fault Finding by Employees, 413†
 Favorable Time for Contracting of Work, 212†
 Federal Audible Signal; Boston & Albany, 517*,
 558†
 Federal Control (See Government Control)
 Federal Traffic Board's Advisory Committee, 447
 Federal Valley Case, 1750
 Federal Valuation (See Valuation)
 Feedwater Heater (See Locomotive)
 Felton, S. M.:
 Contract System; Phil., Wil. & Balt., 949†,
 979
 Estimated Savings Under New Rules, 333
 Rate Testimony, 227
 Western Railway Club, Work of, 1171
 Fence Posts, Concrete, 695
 Fibreboard Company: Bullseye Dust Guards,
 1459
 Fiction and Facts About "Weak" and "Strong"
 Railroads, 359†
 Fifteen-Cell Car Lighting Batteries, 1406†
 Filter, Pressure, 1539
 Fines for Violation of Law, 1351
 Finnegan, G. P., Before I. C. C., 972
 Finnigan's Automatic Train Control, 580*

Firebox (See Locomotive)
 Fire Door, Shoemaker Radial, 1620*
 Firebox Cement, 1617
 Fire Gun, 1622
 Firemen's Brotherhood (See Brotherhood)
 Firemen and Oilers, Working Conditions for,
 485
 Fires:
 Burlington Building at Chicago, 668†, 669*,
 766†, 785*, 840, 902†
 Extinguisher, Hand Fire, 1622
 Pennsylvania Railroad's Insurance, 1748
 Pennsylvania Shops at Meadows, N. J., 981
 Protection of Records, 766†, 785*, 902†
 Miscellaneous, 242, 347, 751
 P. R. R. Losses in 1921, 537
 First Polish Locomotive Works, 990*
 Fisher, W. L.: Testimony Before I. C. C., 481
 Fitch, B. F.: Unit Containers, 468
 Five Years of Freight Traffic Growth Is Lost,
 15*
 Flanged Locomotive Tank, 1710
 Flexible Metallic Connections, Barco, 1070*
 Flexible Staybolts, Welded, 1291*
 Flexway Woodworking Machine, 1400*
 Floods in New York, 1497
 Foreclosure Sales During 1921, 134
 Force-Feed Locomotive Lubricator, 1619
 Force to a Hackneyed Word, 1321†
 Ford, Henry: Operating Results of the D. T. &
 I. to November, 1921, 167†; December,
 858†; March, 1047†
 Foreign Jobs for American Railway Men, 807†
 Foreign Railways (See also names of countries):
 American Aid for, 766†
 Foreign Trade:
 Bids for Argentine Business, 940
 Commerce Bureau Improves Service to Ex-
 porters, 115*
 Convention, 726†, 808†, 1102† (Railway
 Age Not Represented)
 Exports in November, 298, 299, 300; De-
 cember, 847, 891; February, 1251; March,
 1307, 1308
 United Kingdom as a Market for American
 Ties, 1039
 Foremen (See Employee)
 Forged Reversible Brake Beam Strut, 1542*
 Forged Steel Coupler Yoke, 1460*
 Forging Machines Demonstrate Value, 1432†
 Form 19 vs. 31 Train-Order, 408†, 417, 511†
 Forms, Uniform General Contract, 687*
 Fort, Gerrit; Motor Trucks and the Railways,
 468
 Fort Smith & Western: Cash Prizes for Ideas,
 446
 Foundation Investigation, 858†
 Foundation Tests at Chicago, 554†, 561*
 Four-Wheel Drive Rail Car; New Orleans &
 Lower Coast, 749*
 Frame (See Side Frame)
 France:
 Bonds, Authorized Issues of, 1037
 Council, Railway Regulatory, 1039
 Electrification, 82, 1307
 Leasing of State Railway, 450
 Plumb Plan in, 581
 Railroad Notes, 249, 449, 757
 Railway Situation, High Lights in, 81*
 Rates and Wages, 83
 Swedish Electric Locomotives for, 398
 Franklin Railway Supply Company:
 Buffer, Type D, 1620
 Locomotive Booster, 1571*
 Spreader for Driving Boxes, 1709*
 Unit Safety Bar, 1710
 Free Life Insurance on D. & H., 182
 Freight:
 Container System; Cinn. Law. & Aurora,
 475*
 Container System for L. C. L. Freight, 629
 Containers, Unit, B. F. Fitch on, 468
 Erie Contracts for Handling, 347
 Erie Freight Service at New York, 233*, 826
 Loading, Unsystematic, 1004†
 Perfect Package Campaign, 222
 Potato Embargo; Pennsylvania, 1354, 1505
 Tractors and Trailer Trucks in Chicago
 Terminal; Pennsylvania, 225*
 Tractors and Trailer Trucks in Freight
 Houses; N. Y. N. H. & H., 469
 Freight Car (See Car, Freight)
 Freight Car Loadings, Weekly Reports of, 187,
 232, 339, 378*, 434, 460†, 489, 506†, 518*,
 562*, 742, 792*, 817, 872*, 915, 102*,
 (Increase up to April 1), 970, 102*,
 1060*, 1121*, 1167, 1207†, 1214*, 1321†,
 1329, 1480, 1711†, 1742 (to June 10)
 Freight Car Loadings in 1921, 15*, 260†
 Freight Car Surplus, 1919-1921, 17*
 Freight Car Surplus, Weekly Figures of (See
 Freight Car Loading)
 Freight Claim Division (See American Railway
 Association)
 Freight Claims (See Claims)
 Freight Commodity Statistics for 1921, 845
 Freight House at Dallas; M. K. & T., 559*
 Freight Houses, L. C. L., and Warehouses, 629
 Freight Rates (See Rates)
 Freight Shipments Increased and Decreased,
 How, 260†
 Freight Terminal (See Yards and Terminals)

Freight Traffic:

Five Years of Growth Is Lost, 15*
 Statistics for 1921, 498
 Statistics for January, 938
 Trend of, 226*
 Freight Transportation de Luxe, 339*, 748*
 Freight Transportation in New England, 468
 French Railways (See France)
 Friction Draft Gear (See Draft Gear)
 Frictional Resistance of Truck Side Bearings,
 Machine for Determining, 1462*
 Fritch, E. H.: Letter from Russia, 656
 Fritts, J. C.: Car Door Fastener, 1014*
 Front-Ends, Grates and Ashpans, 1237
 Frozen Signals Cause Collision, 1086
 Fruit Growers' Express, 1035
 Fuel (See also International Railway Fuel As-
 sociation; also Coal):
 Economy in Power Plants, 554†, 1433†
 Maintenance of Way Department's Relation
 to Fuel Conservation, 1285
 Pulverized, A Field for, 1683†
 Saving Campaign; C. of G., 479
 Fuel Conservation Joint Committee, 1703
 Fulbright, R. C.: Rate Testimony, 386
 Full Crew Law (See Employee)
 Full Day's Work for a Day's Pay, 411†
 Fundamental Considerations in Locomotive Op-
 eration, 769†
 Futrell Train Line Connector, 1536*
 Future, Confidence in the, 1157†
 Future of Automatic Hose Connector, 361†, 375*,
 906†
 Future of Steam Locomotive, 1004†, 1053†

G

Gage for Steel Wheels, 1539*
 Gages of Australia, Unifying, 107*, 450, 1037
 Gages, Master Pressure and Master Pilot, 1401
 Gaines, F. F., Tribute to, 1580
 Galena Air Brake, Compound, 1402
 Galveston, Causeway, Rebuilding of, 1113*
 Gas-Engine Driven Electric Welder, 1430*
 Gasoline Car (See Motor Cars)
 Gasoline, Distribution and Accounting for, 1600
 Gasoline Truck, Clark, 1568
 Gas Regulator, Milburn, 1427*
 Gear, Draft (See Draft Gear)
 Gear, Simplex Reverse, 1572
 General Committee (See American Railway As-
 sociation)
 General Electric Company:
 Annual Report, 1042
 Automatic Substations; Oregon Electric Ry.,
 347
 Welding Device, 1569
 General Railroad Developments During the
 Year, 9*
 General Railway Signal Company:
 Annual Report, 501
 Auto-Manual Train Control, 521*
 General Rate Investigation (See Rates)
 Generators, Car Lighting, Direct Drive for,
 1432†, 1450*, 1540*
 Germany:
 Danzig Railway Repair Shops to Be In-
 ternationalized, 1194
 Locomotive, Una-flow, 1727*
 Private Ownership, Plan for, 1086
 Propaganda—American Locomotives, 1205†
 Railroad Notes, 847, 940
 Railways Operating Under Difficulty, 93*
 Sleeping Car, Third-Class, 399*
 Strike, 351, 399, 545
 Working Rules, New, 499
 Gibbs, A. W., Tribute to, 1410
 Gibbs, George: Report on Electric Traction, 335
 Giesel, Henry, Co.: Pressure Filter, 1539
 Give the Facts to the Public, 510†
 Glass, Damage Claims on, 1464†
 Goal the Railroads Should Attain, 1011*
 Gold Car Heating & Lighting Company: Devices,
 New, 1399*
 Good Time to Start Work, A, 596†
 Good Work With Poor Tools, 1049†
 Gould Coupler Company:
 Adjuster, Automatic Slack, 1540
 Drive for Car Lighting Generators, 1450*
 Government and Business, 699
 Government and Private Operation, Efficiency of,
 409†
 Government Control (See also United States
 Railroad Administration; also Director
 General):
 Aftermath, J. C. Davis on the, 1169
 Commission Sustains Short Line Inter-
 pretation of "Deficit," 741
 Guaranty Payments Delayed, 987†, 1001†
 Hines, Walker D., Reviews, 287
 McAdoo, W. G., Defends His Administra-
 tion, 327, 371, 392, 409†, 443, 877, and 913
 (Daniel Willard's Reply), 925 and 959
 (Julius Kruttschnitt's Reply)
 Nationalization of Swiss Railways, 90
 Railroads Reducing Debt, 39*, 191
 Reparation, I. C. C. Ruling on, 936
 Government Loans (See Loans)
 Government Ownership:
 Alaska Railroad, 813*, 1189
 Australian Railways, Losses of, 758

Government Ownership (Continued):

- Canadian Railways, D. B. Hanna on, 1065
- Canadian Railways, J. L. Payne on, 1297
- Canadian Railways, W. T. Jackman on, 555†, 567*, 735*
- Swiss Federal Railways Ruin Tourist Business, 545
- Government Payments Postponed to 1923, 987†, 1001†
- Government Railroads in Alaska, 813*
- Grade Crossing (See Crossings; also Highway Crossings)
- Grade Separation in Texas, 887
- Grade Separation Work; N. Y. C. & St. L., 169*
- Graft on Mexico's Railways Reported, 300
- Grain Doors, Standardizing, 166†
- Grand Order of Supervisors, 393
- Grand Trunk Rally at Stratford, 1302
- Grates, Hulson; Wabash, 975*
- Grates, Report of I. R. F. A. on, 1238
- Gray, C. R., on Central Pacific, 1496
- Gray Maximum Service Planer, 1568
- Great Britain:
 - Accident on L. & N. W., 450
 - Acworth, Sir William M., on a Fair Return for the Railroads, 259†, 261, 558†, 811†, 1051†
 - Automatic Stop on Great Central, 545*
 - Bill Allowing Railways to Engage in Highways Transports, 891
 - Combines of Supply Manufacturers, 1251, 1307
 - Consolidation of Railroads, 1087
 - Council System; L. & N. W., 1143
 - Electrical Standardization Committee, 590
 - Electrification of Brighton Railway, 449
 - English Railways During 1921, 76*
 - Excursion and Tourist Services, 163†, 204, 1308
 - Frozen Signals Cause Collision, 1086
 - Institute of Transport, Meeting of, 1266†, 1271
 - Learning Railroad Abroad, 211†
 - Light Signals, Report on, 450
 - Locomotive Coaling Plant, L. & N. W., 544*
 - Motor Truck Competition, 79, 799, 891
 - Owners of Intercoastal Railway of Mexico, 299
 - Passenger Cars, Traveling in, 908†
 - Railroad Notes, 249, 298, 590, 757, 1037, 1038, 1751
 - Railway Car Builders Strike, 800
 - Rates and Wages, 78
 - Rates, Reductions in, 250, 449, 1307
 - "Reductions by Installments," 407†
 - Regan Train Control Demonstration, 195
 - Reorganization of the L. & N. W. and the L. & Y., 204, 250, 298, 351
 - Shippers' Questionnaire on Effect of Rates on Traffic, 451
 - South African Electrification Contract, 398
 - Thornton, Sir Henry on Railways, 590
 - Ties, Market for American, 1039
 - Train Speeds, 1752
 - Turbo-Electric Locomotive; L. & N. W., 940
 - Vacuum Brake Tests; G. N., 810†, 823*
 - Wage Reductions, 249, 399
 - Waterloo Station Completed, 941*
- Great Central, England: Automatic Stop, 545*
- Great Eastern Railway of England:
 - Regan Train Control Demonstration, 195
 - Russell, F. V., Suggests Interchange of Railway Operating Men, 211†
- Great Northern:
 - Contracts with Japanese Steamship Lines, Refuse to Cancel, 203
 - Dividends on Semi-Annual Basis, 766†
- Great Northern of England:
 - Vacuum Brake Tests, 810†, 823*
- Great Reduction of Railway Expenses, 1465†
- Greatest Traffic Slump in History, 3†, 123
- Greece: Electrification, 298
- Grinding, Car Wheel, 1156†
- Grocers Versus Railroads, 459†
- Group Insurance, 1061
- Guaranty Accounts, Payment of, 40, 42
- Guaranty Payments Delayed Till 1923, 987, 1001†
- Guernsey, Charles: Gasoline Propelled Railway Coaches, 1008
- Gunite-Constructed Tank, An Old, 666*
- Gwathmey, Frank: Rate Testimony, 574

H

- Hacksaw, Racine Junior Power, 1569
- Hackneyed Word, Force to a, 1321†
- Hagerty, A. G., Before Senate Committee, 1118
- Hall Color-Light Signal, 186*
- Hall, H. C., Before Senate Committee, 183
- Hall Multiplate Friction Draft Gear, 1128*
- Hanauer, J. J., on Rate of Return, 231
- Hand Brake Attachment, Universal, 1461*
- Hand Brake, Blackall Ratchet, 1396*
- Hand Brake, Peacock Geared, 1425*
- Hand Brake Safety Attachment, 1459*
- Hand Fire Extinguisher, 1622*
- Hand Labor, Eliminating, 1009
- Handling Freight (See Freight)
- Hanger, Catenary, 1617
- Hanna Locomotive Stoker, 429*
- Harding (See President Harding)
- Hardwood Lumber Association, 1747
- Hardwood Lumber Rates Unreasonable, 283, 317

- Harris Bill on Steel Cars Amended, 981
- Hayden, Charles: Letter to Rock Island Stockholders, 357†, 367
- Hay Movement and Freight Rates, 245
- Hays, Joseph W.: Spotting Power Plant Fuel Wastes, 1433†
- Heads (See Rail)
- Headlight, Locomotive, 1572*, 1573*
- Headlight Turbine Packing, 1571*
- Headlights and Cab Wiring, 1576†
- Headlights on Signals, Effect of, 600
- Heater, Berwick Two-Path, 1398*
- Heating: Vapor System, 1541*
- Heat Treated Steel, Use of, 1686†
- Heat Treating Equipment Needed, 1628†
- Heavy Duty Crank Planer, 1570*
- Hecker, A. S., Company: Awarded Contract for Maintenance of Track; Erie, 215
- Hendley Machines, 1567
- Hendrick, C. W., Before I. C. C., 927
- Higgins, J. W., Before Labor Board, 563, 565, 819, 922
- High Lights in French Railway Situation, 81*
- High Pressure Gas Regulator, 1427*
- High Speed of British Trains, 1752
- High Speed Tools, Possibilities of, 1205†
- Highway and Motor Transport, 1266†, 1271
- Highways:
 - California Newspapers on Pounding of, 480
 - Motor Truck Service Colorado P. U. Commission's Decision on, 860†
 - Special Motor Truck Highways, 246
- Highway Crossings (See also Crossings):
 - Laws, 1047†, 1082 (Virginia), 1192, 1206† (Tennessee), 1266†, 1747
 - Protection, Report on, 595†, 604*
 - Signals, Standard, 949†, 1206†, 1345, 1479
 - "Stop" Versus "Danger" Sign, 1269†
 - Substitute, 667†, 694
- Highway Signals, Standard, 1345
- Hines, Walker D.:
 - Federal Control Period Reviewed, 287
 - Testimony Before I. C. C., 321, 467
- Hoch Bill to Amend Transportation Act, 1192, 1249, 1336, 1464†, 1470, 1504
- Hocking Valley: Annual Report, 1759, 1736
- Hoist, Standard Electric, 1566*
- Holland:
 - Chinese Bridge Contracts, 499
 - Electrification, 1086
 - Home seekers' Rates Restored, 555†, 587
 - Hoodless Journal Box Lid, 1397*
 - Hooper, Ben W.: Address Before Nat. Civic Federation, 318
- Hoover, Herbert:
 - Conference Between Labor Leaders and Railway Executives, 196, 232, 243, 257†, 258†
 - Electrification, 242
 - Lumber Conference, 1156†, 1303, 1712†
 - Testimony Before I. C. C., 357†, 379, 383, 407†
 - Trade Associations, 443
- Hope for Normal Railroad in Central Europe, 1471*
- Hopeful Signs, Some of the, 7
- Hose Connectors, American, 361†, 375*
- Hose Coupler, Universal, 440*
- Hose Dismantling and Assembling Machine, 1569
- Hotel Facilities for A. R. E. A. Convention, 667†, 707†
- Hotel on Wheels; Illinois Central, 929
- House Committee on Appropriations: Uses of Federal Valuation, 337
- House Committee on Interstate and Foreign Commerce:
 - Hearings on Amendments to Transportation Act, 516, 1192, 1249, 1336, 1464†, 1470, 1504
 - Mileage Book Legislation, 818, 889, 1336
- Howell Motor Bearing, 1571
- How to Better Railroad Conditions, 6
- How to Successfully Avoid Progress, 1431†, 1685†
- Hulson Grates, Service of Wabash, 975*
- Human Side of Railroad, The, 407†
- Hungary:
 - Electrification and New Equipment, 847
 - Hope for Normal Railroad, 1471*
 - Advice to Ticket Clerks, 490
- Hungerford, H. L.:
 - Letter to Cashiers and Clerks, 1034
- Hunt, Henry T., Before Senate Committee, 290
- Hunt, Robert W. & Co.: Rail Failure, A., 738*
- Huntington, President G. R., 1241*
- Huther Saw Blade, 1569
- "H W" Cell, Edison, 1460*
- Hyatt, L. V.: Distribution and Accounting for Gasoline, 1600

I

- Icing Facilities; S. P. and U. P., 533*
- I-D Service Metal Wheel Gage, 1539*
- Illinois Central:
 - Annual Report, 1075*, 1093
 - Hotel on Wheels Planned, 929
 - Operating Costs in Mississippi, 1082
 - Safety Record Advertised, 888
 - State Rate Control Discussed, 395
 - Suit Against City of Chicago, 887
- Illinois Manufacturers' Association: Copper Bill and Railway Wages, 396
- Imperial Railway Association, Japanese, 104*
- Imprisonment (See Employee)
- Improved Service and Morale Features of 1921, 47*
- Improvements (See also Locomotive; also Construction, New)
- Improvements in the Railroad Situation, 213†
- Improve Your Knowledge of Accounting, 1711†
- Incentive to Reduce Overtime, 1205†, 1713†
- Incentives for Fuel Economy, 1290
- Income, Excess, Rules for Recovery of, 334, 796, 887, 952†
- Increase in Car Loading to April 1, 950†
- Increase in Total Tractive Power and Car Capacity, 507†
- Increasing Track Capacity—Signaling Single Tracks, 1099†
- Independent Pneumatic Tool Company:
 - Drills, "Pigmy" Type, 1622
 - Thor Air Separator, 1618
 - Thor Rivet Buster, 1568
- India:
 - Equipment, Annual Bids for, 398
 - Railroad Notes, 757, 1038, 1194
 - Railways Face a Serious Problem, 105*
- Indiana Harbor Belt: Labor Board's Decision on Contracting of Repairs, 1111, 1158†
- Indiana Highway Crossing Order, 1747
- Individual Drinking Cup Company, Inc., Dixie Cup Vendors, 1402*
- Induction Motors, Self-starting, 748*
- Inductive Interference and Electrolysis, 727*, 1052†
- Industrial Machinery Division of Bureau of Foreign and Domestic Commerce, 115*
- Inland Waterway and Motor Transport, 1266†, 1271
- Institution, National Transportation, 1346
- Institution of Civil Engineers: Vacuum Brake Tests; Great Northern, 810†, 823*
- Insurance (See also Employee): Pennsylvania Railroad's Fund, 1748
- Interchange Practice, A. R. A. Recommends New, 985
- Interchange Rules, Recommended Changes in, 1437*, 1438
- Interchangeable Mileage Bills, 267, 818, 889, 1336
- Interest of the Employees in Railroad Earning Power, 236
- Interference, Inductive, 727*, 1052†
- Interior Treatment of Boiler Waters, 313†, 364†, 412†, 768†, 794, 907†
- Interlocking Officers, I. C. C. Rulings on, 157, 196, 243 (Pennsylvania), 291, 347, 755, 840, 1033
- Interlocking (See Signaling)
- International & Great Northern: Operating Study, 1347
- International Association of Railroad Supervisors of Mechanics: New Rules, 524
- International Association Rotary Clubs:
 - Storey, W. B., on Railroad Growth, 928
- International Locomotive Association, 1082
- International Railway Association:
 - Cab Signals in Europe, 926
 - Congress, S. O. Dunn on, 1100†, 1105*, 1156†, 1163*
 - Delegates to Congress, 555†, 586, 887, 903†
 - Electric Traction for Steam Railroads, 335
 - Tollerton, W. J., on European Trip, 1378
- International Railway Fuel Association:
 - Annual Meeting, 1233, 1283
 - Southern Pacific Sends Enginemen, 936
- Intercoastal Railway of Mexico: British Owners Become Restive, 299
- International Signal Company: Webb Automatic Train Stop Tested on the Erie, 175*
- Interpreting Train Control Specifications, 408†
- Interstate Commerce Commission:
 - Accident Bulletin No. 80, 242; No. 81, 936
 - Accident Investigations, 1343, 1463†, 1483, 1712†
- Accidents Reports:
 - C. R. I. & P. near Plains, 1319†, 1332
 - Oregon-Washington R. R. & Nav. Co. at Celilo, 1031*
 - P. R. R. Locomotive, 442
 - P. & R. at Woodmont, 168†, 173, 357†, 490, 549
 - Texas & Pacific at Camps, 357†, 374
- Accidents in 1921, 825, 903†
- Appointments, Senate Delays Confirmation of, 188
- Appropriation, 291
- Automatic Train Control Hearing, 767†, 783, 787, 837, 859†, 927, 971*, 1714†, 1739 (Order Permanent)
- Bill of Lading Cases, 447
- Bureaus, Reports of, 194, 234
- Bureaus Stepping-Stones to Advancement, 1711†
- Coal Car Distribution, to Investigate, 1748
- Commissioner Each on Mileage Bill, 268
- Commissioner Potter on Rates and Wages, 221
- Consolidation Hearings, 792, 1025, 1141, 1731
- Consolidation with Labor Board, Urged, 392
- Contracts of Railroads with Japanese Steamship Lines, 203
- Co-operation with State Commissions, 1076
- Freight Commodity Statistics for 1921, 845
- Freight Traffic in 1921, 498
- Harris Bill on Steel Cars Amended, 981
- Hoover, Herbert, on Railroad Situation, 357†, 379
- Kansas City, Mexico and Orient Asks Increased Divisions, 889

GENERAL INDEX—Continued

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

Interstate Commerce Commission (Continued):

Loans to Carriers, 40, 191
 Locomotive Repairs, Contracts for, 858†, 867, 1716†
 Members Testify on Capper Bill, 183
 National Railway Service Corporation Asks Loan, 540
 New England Shippers Ask Removal of Baltimore and Philadelphia Port Difficulties, 542
 Operating Statistics for November, 444; December, 538; January, 842; February, 982
 Orders Increasing Intrastate Rates Upheld, 519, 556†, 757
 Parcel Post Rates, 1193
 Pittsburgh and West Virginia's Application to Control West Side Belt, 364†, 443
 Power Brake Investigation, 751, 797, 840, 1213, 1332
 Provisions for 6 Per Cent Return and Government Loans Expire, 534
 Rate Investigation—Hearings, 192, 227, 281, 319, 379, 383, 419, 481, 535 (Information Required), 573, 731, 1110, 1178, 1207†, 1221 (Decision), 1227, 1267†, 1278, 1282, 1743, 1750
 Rate Investigation—Testimony of:
 Aishton, R. H., 193, 576
 Bikle, H. W., 573
 Brigham, D. S., 192
 Bronson, W. S., 733
 Byram, H. E., 228
 Chandler, W. H., 319
 Cochran, H. A., 576
 Colpitts, W. W., 481
 Cushing, George H., 282
 Dunn, S. O., 229
 Felton, S. M., 227
 Fullbright, R. C., 386
 Fisher, Walter L., 481
 Gwathmey, Frank, 574
 Hanauer, Jerome J., 231
 Hines, Walker D., 321, 467
 Hoover, Herbert, 357†, 379, 383, 407†
 Johnson, Stanley H., 575
 Johnston, Forney, 733
 King, William B., 321
 Lamb, G. W., 192, 578
 Langhorne, M. D., 282
 Lutz, S. G., 578
 Mapother, W. L., 228
 Morrow, J. D., 281, 421, 577
 Pettijohn, Fred, 385
 Plumb, Glenn E., 733
 Powell, T. C., 575
 Putnam, F. W., 575
 Reed, Clyde M., 385
 Shippers, 482
 Shriver, George M., 192, 230, 578
 Smith, Hoke, 733
 Taylor, L. S., 383
 Thom, Alfred, 734
 Thorne, Clifford, 731
 Topping, J. A., 282
 Warfield, S. Davies, 481 (Pooling Plan), 576
 Warne, Frank J., 419, 1067
 Wettling, L. E., 192, 230, 578
 Willard, Daniel, 193, 227, 230, 576
 Wood, Fred H., 385, 573

Regulation of Security Issues, 27*

Report of Bureau of Locomotive Inspection, 331*

Return for the Railways, 310†

Revenues and Expenses (See Revenues)

Revision of Operating Expense Classification, Proposed, 1466†, 1473

Seasonal Variation of Operating Income, 273*

Southern Freight Rates Investigation, 1750

State Commissioners, Conference with, 751, 798, 1076, 1109

Trend of Freight Traffic, 226*

Valuation (See Valuation)

Wage Statistics for September, 242; October, 442; November, 755; December and Year 1921, 888; January, 1033; February, 1140; March, 1465†, 1497;

Wages, 1916 and 1921, 1208†

Wages, 1920 and 1921, 122, 888, 1140

Interstate Commerce Commission Rulings:

Accounting for Settlements with Railroad Administration, 378

Automatic Train Control Order, 189, 211†, 279, 308†, 312†, 357†, 408†, 443, 767†, 783, 787 (Hearing), 837, 859†, 927, 971*, 1711†, 1739 (Order Permanent)

Crescoted Lumber, Conference Ruling on, 1306

"Deficit," Short Line Interpretation of, 741

Excess Income Recovery of, 334, 796, 887, 952†

Federal Valley Case, 1750

Hardwood Lumber Rates, 283, 317

Interlocking Officers, 157, 196, 243 (Pennsylvania), 291, 347, 755, 840, 1033

Kansas Intrastate Rates, 890

Loans Authorized, 41

Missouri and North Arkansas, Increased Divisions for, 786

New England Rate Divisions, 425, 765†, 798, 845, 1305

Interstate Commerce Commission Rulings (Continued):

New York Central Authorized to Acquire Chicago Junction, 866, 1244
 New York Passenger Fare Case, 519, 556†, 757
 Pittsburgh and West Virginia's Application to Control West Side Belt, 364†
 Potato Embargo at New York; Pennsylvania, 1354, 1505
 Rate Reduction, 10 Per Cent, 1207†, 1221, 1267†, 1278, 1282, 1743 (S. O. Dunn on), 1750
 Records, Preservation of, 981
 Texas Intrastate Rate, 1109
 Wisconsin Passenger Fare Case, 519, 556†, 776, 1109
 Interstate Railroad Before Labor Board, 279, 1018
 Inter-State Safety Appliance Company, Inc.:
 Hand Brake Safety Attachment, 1459*
 Interview with S. M. Vaulain, An, 911*
 Intrastate Rates (See also State Versus)
 Wisconsin Case, 519, 556†, 776; Texas, 1109
 Inventory of Materials, 1654
 Investigate Foundations More Carefully, 858†
 Investigation of Rate of Wear of Rails, 1206†
 Irish Railway Strike, 450
 Irish Railways, Government Investigation of, 1037
 Iron and Steel Structures, A. R. E. A. Report on, 634*
 Iron Box Car Wrecked; N. C. & St. L., 490
 Iron, Steel and Ore, Rate Reductions Urged on, 282
 Italy:
 Electrification of Railways, 87, 449, 1105
 Railroad Notes, 847, 1751
 Repair of Rolling Stock, 299
 Review of Railway Situation, 85*

J

Jack Base, Track, 706*
 Jacks, Joyce, 704*, 1428*
 Jackson, W. J.: Chicago & Eastern Illinois Ends Receivership, 181*
 Japan:
 Observations on Railroads, 101*
 Railroad Notes, 398
 Shantung Railway, The, 307†
 Japanese Steamship Lines, Railroads Refuse to Cancel Contracts with, 203, 397
 Jars (See Battery Jars)
 Java: Railroad Notes, 940, 1037
 Jerome Packing Rings, 839*
 Jewell, B. M.:
 Industrial System Attacked, 809†, 821, 921
 Labor Problems, 318
 Testimony Before Labor Board, 739, 774, 809†, 819, 821
 Johnson, Alba B.: Railway Business Association Opposes Proposal for Commissioner General of Transportation, 390
 Johnson, Stanley H.: Rate Testimony, 575
 Joint Bureau of Research, A, 1051†
 Joint Commission of Agricultural Inquiry:
 Educational Transportation Institution, 1346
 Railway Wages, 1112
 Report on Transportation, 967, 1000†, 1015
 Terminal Market Facilities, 1480
 Joint Committee of the Federal and State Commissions: Plan of Co-operation, 1076
 Joint Committee on Steel Castings for Railroads: Specifications, 1588*
 Jones, J. J., and the Dining-Car Business, 537
 Journal Box Lid, 1397*
 Journal Box, Passenger Car, 1616*
 Journal Lubrication, 487*
 Joyce Jacks, 704*, 1428*
 Jugo-Slavia: Railroad Notes, 891
 Jumbo No. 2 Gear, 1537*

K

Kansas City, Mexico & Orient: Rate Divisions, Asks Increased, 889
 Kansas City Southern: Scrap Dock, 1665*
 Kansas Intrastate Rates, L. C. C. Order on, 890
 Kansas, Land Development in; A. T. & S. Fe., 396
 Kentucky Manufacturers' Association: Commissioner Potter on Rates and Wages, 221
 Key, Brake Shoe, 1540*
 Key Connected Forged Coupler Yoke, 1626*
 Keystone of the Arch, The, 1371†
 Killing Weeds, 1010
 King Pneumatic Tools, 1542
 King Type Cups, Packing Rings for, 839*
 Knocking, Cut Out the, 413†
 Knowledge of Accounting, Improve Your, 1711†
 Koyl, C. H.: Interior Treatment of Boiler Waters, 312†
 Kruttschnitt, Julius, Before Senate Committee, 925

L

Labor (See also Railroad Labor Board; also Employee; also Plumb Plan):
 Commissioner Potter on, 221
 Conferences Between Labor Leaders and Railway Executives, 196, 232, 243, 257†, 755

Labor (See also Railroad Labor Board; also Employee; also Plumb Plan (Continued):

Cost of Living and Wages, 214†
 Council System; L. & N. W., 1143
 Economics of, A. R. E. A. Report on, 642*
 Fish, F. P., on, 344
 Hayden, Charles, on Conditions, 368
 Hooper and Plumb Discuss Problems, 318
 Italy, Organizations in, 87
 Leaders Meet at Cincinnati, 1320†, 1338, 1476
 Maintenance—Power Equipment, 1009
 Mine and Rail Unions Meet, 490
 Political Coalition, Attempted Formation of, 485
 Prices for, 1433†, 1435
 Progress Towards Normalcy, 31*
 Railroad Administration's Labor Policy, 372
 Regional Board of Adjustment, W. G. Biedt Opposes, 220
 Regional Boards of Adjustment Formed, 34
 Saving in Cost of Work, 902†
 Strike Threats, 1320†, 1476, 1713†, 1719
 Territorial Conference Committees, 257†, 258†
 Time to Play Fair, 407†
 Trainmen and the Eight-Hour Day, 461†
 Train Service Employees, Negotiations Between Railways and, 258†, 293, 461†
 Unions May Be Sued, 1351
 Wages in 1916 and 1921, 1208†
 Warne's, Frank, J., Testimony Before I. C. C., 419
 "Labor" and the Ananias Class, 1208†
 Labor Board (See Railroad)
 Labor-Saving Devices, R. H. Ford on, 1009
 Laboratory, A Co-operative, 1685†
 Lackawanna Steel Company Purchased by Bethlehem Steel Corporation, 1196
 La Follette (See Senator La Follette)
 Lake Erie & Western: Purchase by Van Sweringen Interests, 1047†
 Lake Michigan Water, Analysis of, 1168
 Lamb, G. W.: Rate Testimony, 192, 578
 Lamps, Classification, and Headlights, 1575†, 1581*
 Lamps, Oil, Care of, 1712†, 1734
 Lamps, Train Lighting, 1455*
 Land Development in Kansas; A. T. & S. Fe., 396
 Large Motor Passenger Cars, 1405†
 Large Size Boiler Plates, 1620
 Lassiter-Milholland Staybolt Machine, 1568
 Lateral Motion Box, Woodward, 1710*
 Lathe, Engine, American, 1567
 Lathe, Engine, The Neglected, 766†
 Lathe, Hendley Toolroom, 1567
 Lathe, Wheel, 950†
 Lauck, W. J.: Testimony Before Senate Committee, 960, 1117, 1339, 1726
 Laughlin-Barney Tube Shearing Machine, 1568
 Learning Railroad Abroad, 211†
 Lee, Elisha:
 Address Before A. R. A. Purchases and Stores Division, 1593
 Address Before Transportation Club, 1133
 Legal Decisions:
 Abandonment of Intrastate Road, 799
 Boiler Inspection Act, 247
 Claim for Express Rates for Carrying Gold as Mail, 588
 Demurrage Charges, 448
 Excessive Damages, 543
 Federal Employers' Liability Act, 247, 543, 588
 Federal Safety Appliance Act, 448, 498, 542
 Land Grant; Southern Pacific, 248
 Miscellaneous, 247, 296, 448, 543, 939, 989, 1036, 1087, 1143, 1250, 1354
 North Dakota Excise Tax, 248
 North Dakota Rate Case, 397
 Notice of Claim, Thirty Days; Oregon Short Line, 588, 724†
 Pressed Steel Mfg. Co. Patent Suit, 292
 Reading Dissolution Decree, 1306
 Safety Appliance Act, 247
 Service Letter Laws Upheld, 1751
 Southern Pacific-Central Pacific Merger Case, 1296, 1354, 1495
 Stoker Infringement Suit, 1351
 Texas Suit Dismissed, 588
 Unions May Be Sued, 1351
 Wisconsin and New York Passenger Fare Cases, 519, 556†, 757
 Workmen's Compensation Act, 247
 Legality of Wage Conferences Attacked, 739, 774
 Legislation in Congress (See Also Senate; also House), 1336
 Legislation, Radio, 1157†
 Legislation to Regulate Aeronautics, 491
 Lehigh & New England: Locating the Factory, 1319†
 Lehigh Valley:
 Annual Report, 1157†, 1185*, 1200
 Derailment of Black Diamond Express, 1176*, 1206†
 Insurance for Employees, 883
 Locomotive Cranes, Use of, 365*
 Pipe, Pre-Cast Concrete, 706*
 Lesson of Seven Collisions, 1463†, 1483, 1712†
 "Lest We Forget," 163†
 Let's Get Acquainted, 807†
 Letter from Russia to E. H. Fritch, 656
 Letter, H. L. Hungerford's; Southern, 1034

Letter to Stockholders; C. R. I. & P., 357†, 367
 Libby, J. H., Before Labor Board, 1081
 Lid, Journal Box, 1397*
 Life Insurance, Free; D. & H., 182
 Life Members, A. R. A. Mechanical Division, 1420
 Life of Ties, Determining, 779*
 Light Gasoline Motor Cars, 1372†
 Light Traffic an Aid to Construction, 949†, 1270†
 Lighting:
 Car Lighting Costs, 408†
 Direct Drive for Car Lighting Generators, 1432†, 1450*, 1540*
 Edison "H W" Cell, 1460*
 Fifteen-Cell Car Lighting Batteries, 1406†
 Headlights and Cab Wiring, 1576†
 Headlights and Classification Lamps, 1575†, 1581*
 Locomotive Lighting Equipment, 1572*, 1573*
 Rubber Battery Jars; A., T. & S. Fe., 554†, 579*
 Sediment Measure for Batteries, 1566
 Shop and Enginehouse Facilities, 212†
 Train Lighting Equipment, 1710
 Train, Report on, 1432†, 1450*
 Light Signal (See Signaling)
 Lights at Highway Crossings, 362†
 Lightweight Railway Motor Car, 920*
 Lima Locomotive Works: Annual Report, 760
 Lines Abandoned During 1921, 147*
 Liquidation Problems of Railroad Administration, 1169
 Little Giant Drill Motors, 1401
 Live Stock Claim Prevention, 348
 Living (See Cost of)
 Ljungstrom, F.: Turbine Locomotive, 1295*
 Loading, Cooper, 1463†
 Loading Rules, Report on, 1446*
 Loading, Unsystematic Freight, 1004†
 Loans:
 Certified by the I. C. C., 41, 191
 National Railway Service Corporation Asks, \$100,000,000 Loan, 540
 Period for Filing Applications Expires, 534
 "Locating the Factory," 1319†
 Lock, Car Door, 1014*
 Locomotive:
 Adhesion and Rack, for Sumatra, 263*
 Alloy Steels for, 257†
 Appliances, Education in Use of, 953†
 Auxiliary Devices, Air-Operated, 1681
 Boiler Check Valve, 1616*
 Boiler Explosions, 332*
 Boiler Plates, Large Size, 1620
 Boilers, Design and Maintenance of, 1687*
 Boilers, Pitting and Corrosion in, 667†, 690
 Booster, 1571*
 Buffer, Type D, 1620
 Cab Ventilating Set, 1074*
 Checking Tonnage Rating, 358†
 Connections, Barco Flexible Metallic, 1070*
 Construction, Report on, 1631
 Design, Modern Tendencies in, 909
 Development, Recent Tendencies in, 49*
 Driving Box Spreader, 1709*
 Driving Box, Woodward, 1710*
 Electric:
 Chilean Freight, 1005*
 Chilean Passenger, 527*
 Delano, Frederic A., on, 1004†, 1053†
 Gibbs, George, Report of, 335
 Swedish Locomotives for France, 398
 Switching Service; N. Y., N. H. & H., 773
 Exhaust Nozzle Cover, Detroit, 1621*
 Feedwater Connections Barco, 1070*
 Feedwater Heater Caille-Potonie, 263*
 Feedwater Heaters, Reports on, 1235*, 1639
 Firebox with Double Arch, 1565*
 Fire Door, Shoemaker Radial, 1620*
 Front-Ends, Grates and Ashpans, 1237
 Fuel Saving; Central of Georgia, 479
 Future Locomotive, 1004†, 1053†
 Grates, Hulson; Wabash, 975*
 Headlight Turbine Packing, 1571*
 Headlights, 1572*, 1573*
 Headlights and Classification Lamps, Report on, 1575†, 1581*, 1677
 Improvements, A Broad View of, 807†
 Improvements, G. M. Basford on, 177
 Inspection at Terminals, 1684†
 Inspection, Report of Bureau of, 331*
 Lighting Equipment, 1572*
 Lubrication of Journals, 487*
 Lubricator, Force-Feed, 1619
 Maintenance, 1047†
 Mallet, Meter Gage, for Burma, 847*
 Mogul Obsession, The, 951†
 Mountain Type; Manila Railroad, 387*
 Mountain Type; Union Pacific, 1325*
 Oil Burning, Operating, 1187
 Operation, Fundamental Considerations in, 769†
 Operation, Statistics of, 746
 Orders in 1921, 124*
 Orders in 1922, 905†, 1048†, 1267† (First Five Months)
 Ownership, Factors in Business of, 471
 Performance with Hanna Stoker; N. & W., 431*
 Prices, 44
 Purdue University's Testing Locomotive, 797
 Rebuilt Type; A. C. & Y., 407†, 423*
 Repairs, I. C. C. Reports on Contracts for, 858†, 867, 1716†
 Santa Fe Type; Manila Railroad, 387*
 Southern Pacific, 2-10-2 Type for, 1553*
 Starter, Street, 1710
 Stoker Distributor Tube, 1617*
 Stoker Fired, Efficiency of, 1686†

Locomotive (Continued):

Stoker, Hanna, 429*
 Stoker Infringement Suit, 1351
 Thermic Syphon Tests, 977*, 1625
 Tractive Power and Car Capacity, 507†
 Turbine, 50, 1295* (Swedish State Railways), 1629†
 Turbo-Electric, in England, 940
 Types from a Transportation Viewpoint, 976
 Unaflo, 1727*
 Water Alarm, Low, 1618*, 1621*
 Water Column, Edna, 1617*
 Water Treatment, Wayside Tank, 1619
 Wheels, Rolled Steel Trailer, 571*
 Locomotive Coaling Plant, English, 544*
 Locomotive Cranes on the Lehigh Valley, 365*
 Locomotive Engineer Tells How to Improve Operation, A, 861†, 1104†, 1161†, 1323†
 Locomotive Exports (See Foreign Trade)
 Locomotive Facilities at Clifton Forge, Va., 955*
 Locomotive Operation (See Locomotive)
 Locomotive Stoker Company:
 Distributor Tube, 1617*
 Suit Against Elvin Company, 1351
 Locomotive Tank, Flanged, 1710
 Locomotive Works, First Polish, 990*
 London & North Western:
 Accident, 450
 Amalgamation with the L. & Y., 204, 250, 298, 351
 Coaling Plant at Willesden, 544*
 Turbo-Electric Locomotive Being Tried, 940
 Council System for Dealing with Labor Matters, 1143
 London, Brighton & South Coast: Electrification, 449
 Long Island:
 Oiling of Roadbed, 1747
 Safety Record, Three-Year, 1265†
 Ticket Frauds Prohibited by Law, 988
 Loree, L. F.:
 Free Life Insurance on D. & H., 182
 Lauck Charges Denied, 1726
 Rate Decision, I. C. C., 1278
 Loss and Damage (See Claims)
 Louisville & Nashville: Accident near Flomanton, 1747
 Lovett, R. S., Before Senate Committee, 1339
 Lowest Bidder, The, 510†
 Low Platform Electric Truck, 1182*
 Low Water Alarm, Cleveland, 1618*
 Low Water Alarm, Ohio, 1621*
 Lubrication:
 Force-Feed, 1619
 Galena Air Brake Compound, 1402
 Present Methods Faulty, 487*
 Type B Automatic Lubricator, 1619*
 Lug, Drop Forged Draft Gear, 1618*
 Luhrs, J. G., Scores Hoover Conferences, 243
 Lumber (See also Ties and Timber):
 Conference, 1156†, 1712†, 1303
 Prices for, 45
 Railroads and the Lumber Industry, 1576†
 Treated Car; C. B. & Q., 271
 Lumber Rates, Southern Hardwood, 283

M

Machinery, Old, Limits Output, 307†
 Machine Tool Market, 1559
 Machine Tool Be Operated Continuously, Must a, 1627†
 Machine Tool Prices, 1100†
 Machine Tools for Engine Terminals, 1544†
 Machinery Hall Teaches a Lesson, 1577†
 Machines (See also Shops; also names of machines): Specialized vs. Wide-Range, 999†
 Mack Rail Car; N. Y. N. H. & H., 315*
 Madison-Kipp Corporation: Force-Feed Locomotive Lubricator, 1619
 Mail:
 Aerial Service in 1921, 195, 929
 Terminal at Chicago, 513*
 Maine Central: Annual Report, 777
 Maine Roads Not Included in Agricultural Rate Reduction, 295
 Maintenance Accounts, Charging the Cost of Treating Ties to, 416, 1003†, 1160†
 Maintenance of Equipment:
 Bad-Order Car Figures, 950†
 Boilers, Locomotive, 1687*
 Deferring Repairs a Costly Policy, 215†
 Friction Draft Gear, 1372†
 Locomotive Maintenance, 1047†
 Oil Burning Locomotives, 1187
 Train Cost, Relation to, 1405†, 1409
 Maintenance of Way (See also American Railway Engineering Association):
 Contract Awarded A. S. Hecker Company by Erie, 215
 Crossings, Reciprocity in Upkeep of, 459†, 812†
 Crossings, Upkeep of, 459†
 Labor-Saving Devices, 1009
 Now on the Upgrade, 53*
 Work Should Be Pushed, 1319†
 Maintenance of Way Department to Fuel Conservation, Relation of, 1285
 Maintenance of Way Employees' Wages Cut by Labor Board, 911, 1268†, 1279, 1320†, 1476
 Maintenance, Signal Rules for, 601*
 Major Church on Motor Truck Highways, 246
 Making Good with the Employees and the Public, 879*

Making of the March Dailies, 657
 Management Responsibility and Safety First, 725†
 Manchester, Ga., Derailment near, 887
 Mandatory Rules Feature 1921 Accounting Progress, 58
 Manhattan Produce Yard; Pennsylvania, 1248
 Manila Railroad:
 Electrification, 204
 Locomotives, American, 387*
 Manion, E. J.:
 Testimony Before Labor Board, 564
 Testimony Before Senate Committee, 290
 Manufacturers Urge Consolidation of Labor Board and I. C. C., 392
 Mapother, W. L.: Rate Testimony, 228
 Maps:
 Australian Railways, 108*
 Chilean Railroad Electrification, 217*
 Japanese Railways, 102*, 103*
 Missouri & North Arkansas, 1341*
 National Railways of Mexico, 1056*
 March Dailies, Making of the, 657
 Marine Piling, San Francisco Bay, 272
 Marked Improvements in Railroad Situation, 213†
 Markham, C. H.: Tribute to Labor Board, 984
 Maryland Full Crew Law Repealed, 840, 1133
 Masonry, Report of A. R. E. A. on, 715*
 Massachusetts, Bill-Boards Regulated in, 1206†
 Massey Concrete Products Corporation:
 Pipe, 706*
 Poles, 664*
 Master Boiler Makers' Association: Officers, 1351
 Master Car Builders' Association (See American Railway Association: Division V)
 Master Pressure and Master Pilot Gages, 1401
 Material Handling Equipment:
 Locomotive Cranes; Lehigh Valley, 365*
 Materials (See also American Railway Association: Division VI—Purchases and Stores):
 Accounting and Mechanical Facilities, 1652*
 Classification of, 1575†, 1598
 Inventory, 1654
 Mayor Bader's Address, 1407
 Prices for, 43*, 1433†, 1435
 Reclamation of, 1628†, 1657*, 1683†, 1684†
 Specifications and Tests for, 1576†, 1577†, 1586, 1686†
 Turnover of, 1628†
 Unit Piling and Numerical Numbering System, 1673
 McAdoo, W. G.:
 Testimony Before Senate Committee, 327, 371, 392, 409†, 443, 877 and 913 (Daniel Willard's Reply), 925 and 959 (Julius Kruttschnitt's Reply)
 McConway & Torley Company: Coupling Devices, 1429
 Meadville Machinery Company: Labor Board to Investigate Erie's Contract with, 751
 Means of Determining the Average Life of Ties, A, 779*
 Measure, Sediment, for Batteries, 1566
 Mechanical Department:
 Education in C. M. & St. P., 223
 Public Opinion, 1100†
 Stores Department, Help the, 1576†
 Mechanical Devices in Stores Accounting, 1652*
 Mechanical Devices, Trying Out, 1431†, 1685†
 Mechanical Division (See American Railway Association—Division V)
 Mechanical Interlocking, Report on, 653*
 Meeting a Rerouting of Traffic, 1711†
 Meetings with Trainmen; Compulsory Attendance, 510†
 Memorial, Canadian Pacific, 984, 1249*
 Mercury Tractor and Trailer, 1400*
 Mercury Tractors and Trailer Trucks in Chicago Terminal; Pennsylvania, 225*
 Merger of Steel Companies, 1352
 Merrill Company: Plug Valves, 1565
 Metal Band Saw, Atkins, 1402
 Metropolitan Chapter of the New York Central Veterans' Association, 244
 Mexico:
 British Owners of Inter-oceanic Railway Become Restive, 299
 Construction of New Lines, 299, 398, 757, 758, 990, 1193
 Graft on Railways Reported, 300
 National Tehuantepec, Rehabilitation of the, 1144
 Progress in Railway Rehabilitation, 73*
 Railroad Construction in 1921, 154
 Railroad Notes, 499
 Railways Prepared for Improved Business, 1055*, 1119*
 Salinas, Leon, at A. R. A. Convention, 1457
 Service Resumed on Southern Pacific, 292
 Michigan Central:
 Annual Report, 1493, 1511
 Stafford Roller Bearing Trucks, 1460*
 Mid-Day Luncheon Club, Springfield, Ill.: Hanna, D. B. on Government Ownership in Canada, 1065
 Midgley & Borrowdale:
 Bullseye Dust Guards, 1459
 Protecto Weather Stripping, 1542
 Midvale Steel & Ordnance Company: Annual Report, 760
 Milburn Cut-Weld Torch, 704*
 Milburn High Pressure Gas Regulator, 1427*
 Mileage Abandoned in 1921, 147*
 Mileage Book Bill, 267, 818, 889, 1336

GENERAL INDEX—Continued

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

- Mileage Built in 1921, 149*
 Mileage, Russia's Railway, 91
 Mill, Colburn Boring, 1567
 Mill Room Equipment, Don't Neglect, 408†
 Miller Train Control Brief, 971
 Milling Machine, The, 1627†
 Mine and Rail Unions Meet, 490
 Miners' Wages, Coal Prices and Rates, 726†
 Miniature D. C. Track Circuit, 664*
 Ministry of Transport, The, 77
 Minneapolis, St. Paul & Sault Ste. Marie: Pennington, Edmund, Becomes Chairman, 1241*
 Minneapolis, Timber Treating Plant at, 1063*
 Minnesota Car Repair Shed Law Declared Invalid, 1248
 Missouri & North Arkansas:
 Increased Divisions Ordered for, 786
 Operation Resumed, 1341*, 1747
 Wage Controversy Before Labor Board, 440, 460†, 484
 Missouri, Kansas & Texas:
 Freight House at Dallas, Tex., 559*
 Shop Employees' Dispute Before Labor Board, 1080, 1125
 Missouri Pacific:
 Gasoline, Distribution and Accounting for, 1600
 Water Treatment, Savings from, 1188
 Mixing Railroad and Religion, 412†, 510†, 557†
 Modern Equipment, Economy of, 1463†
 Modern Handling of Package Freight, 469
 Modern Tendencies in Locomotive Design, 909
 Modernization of Stationary Boiler Plants, 1629†, 1641*
 Mogul Obsession, The, 951†
 Moisture Separator, 1618
 Molitor, Col. F. A.:
 Railway Securities Situation, 267
 Molybdenum Steel Shovel, 924*
 Monument to Brazil, American, 1355*
 Morale and Service, Improved, Features of 1921, 47*
 Morrow, J. D.: Rate Testimony, 281, 421, 577
 Morton Manufacturing Company: Top Vestibule Buffing Mechanism, 1459*
 Motion Pictures and Track Stresses, 916*
 Motion Pictures in St. Louis Station, 1033
 Motive Power Policy Progressive, 177
 Motor and Inland Water Versus Rail Transport, 1266†, 1271
 Motor Bearing, Howell, 1571
 Motor Cars:
 Branch Passenger Service, 1104†
 Competition in Switzerland, 89
 Diesel-Electric, Swedish, 1183*
 Diesel Engine for, 1431†
 Four-Wheel Drive; New Orleans & Lower Coast, 749*
 Gasoline, Light, 1372†
 Gasoline Propelled, Charles Guernsey on, 1008
 Large Passenger Cars, 1405†
 Lightweight Railway, 920*
 Maintenance of Way, 1010
 N. Y. N. H. & H., 315*, 474
 Operating Results; Pittsburgh & Shawmut, 516
 Service Coach; C. C. C. & St. L., 1069*
 White Gasoline, Tenn., Ken. & No., 886*
 White Gasoline; Union Transportation Co., 1125*
 Motor Trucks:
 Competition in England, 79, 799, 891
 Competition in New England, 1051†
 Competition, 314†, 1269†
 Eric Freight Delivery at New York, 233*, 826
 Highways, California Newspapers on, 480
 Highways, Major Church on, 246
 New England, Freight Transportation in, 468
 Motors, Little Giant, 1401
 Motors, Polyphase, 584*, 1186*
 Motors, Self-Starting Induction, 748*
 Motors, Turntable, Controller for, 1625*
 Mountain Type (See Locomotive)
 Movements, Car, Speeding Up, 411†
 Movies (See Motion Pictures)
 Multiple-Unit Car; N. Y. N. H. & H., 1477*
 Murphy-Sisson Patent Suit, 292
 Music at Sacramento Shops; S. P., 490
 "M-V All Weather" Train Control, 185*
 Nashville, Chattanooga & St. Louis:
 Iron Box Car Wrecked, 490
 Wireless Communication, 257†
 National Agreement (See Railroad Labor Board)
 National Association of Owners of Railroad Securities:
 Car Pooling Plan, 481, 508†, 576, 808†, 811†, 860†
 Plan for Unified Terminals at Chicago, 1179*
 Warfield, S. Davies, Warns Against Attacks on Transportation Act, 776
 National Association of Railroad Tie Producers:
 Annual Meeting, 322, 348
 National Association of Railway and Utilities Commissioners: I. C. C. Conference with, 751, 798, 1076, 1109
 National Automobile Chamber of Commerce: Shipments of Automobiles, 1192
 National Brake Company, Inc.: Peacock Brake for Blind End Cars, 1425*
 National Civic Federation: Hooper and Plumb Discusses Labor Problems, 318
 National Coal Association: Morrow's, J. D., Rate Testimony, 281, 421
 National Engineering Standards, 347, 796
 National Foreign Trade Convention, 726†, 808†, 1102† (Railway Age Not Represented)
 National Industrial Traffic League:
 Rate Inquiry, I. C. C., 319
 Repeal of Section 15-a, 350
 Wage Disputes, 1079
 National Perfect Package Campaign, Results of, 222, 295
 National Railway Appliances Association:
 Annual Meeting, 656
 Exhibit, 294, 617*, 707†
 Officers and Directors, 619*
 Presidents Group, 701*
 National Railway Devices Company:
 Shoemaker Radial Fire Door, 1620*
 National Railway Service Corporation:
 Loan, Application for, 40, 540
 National Railways of Mexico: President Salinas at Mechanical Convention, 1457
 National Safety Council:
 Census of Safety Workers, 242
 National Steel Car Corporation:
 Sleeping Cars; C. P., 291
 National Tehuantepec, Rehabilitation of, 1144
 National Transportation Institution, 1346
 Nationalization of Swiss Railways, 90
 Neatness in Handling Oil, 1712†, 1734
 Need of Additional Trackage, 999†
 Need of a Sinking Fund to Care for Losses Incidental to Handling of Materials, 1697
 Needs of the Railroads, 698
 Needs of the Stores Department, 1544†
 Needs of Water Transportation, 1209†
 Neglected Engine Lathe, The, 766†
 Net Operating Income (See Revenues and Expenses)
 Net Ton-Miles—By Months, 15* (See also Operating Statistics)
 New Construction in 1921, 149*
 New Devices, Trying, 1431†, 1685†
 New England Association of Railroad Veterans, 812†
 New England Governors' Committees, 1748
 New England Lines:
 Freight Transportation, 468
 Maine Roads Not Included in Agricultural Rate Reduction, 295
 Motor Truck Competition, 1051†
 Rate Division Case, I. C. C. Ruling on, 425, 765†, 798, 845, 1305
 New England Railroad Club:
 Modern Handling of Package Freight, 469
 New England Shippers Ask Removal of Baltimore and Philadelphia Port Difficulties, 542
 New Haven (See New York, New Haven)
 New Jersey Full Crew Law Repealed, 442, 585, 796
 New Orleans & Lower Coast: Motor Cars, Four-Wheel Drive, 749*
 New Rules (See Railroad Labor Board)
 New South Wales: Comparative Cost of Repairs, 1087
 Newton Bill to Amend Transportation Act, 1336, 1464†, 1470
 Newton Crank Planer, 1570*
 New York Air Brake Company: Strainer, Air Pump, 1623*
 New York Central:
 Annual Report, 1239, 1259
 Castleton Bridge Project, 1157†, 1197, 1246*
 Chicago Junction, Acquisition of, 866, 1244
 Employees Fined for Theft, 394, 796
 Lake Erie & Western Purchased by Van Sweringen Interests, 1047†
 Locomotive Repairs, I. C. C. Report on Contract for, 858†, 867, 1716†
 Painesville Crossing Disaster, 555†, 585
 Photographs on Commutation Tickets, 939
 Piece Work Dispute, 1472
 Police, Corrupt, 1319†
 Portraits on Family Tickets, 350
 Shippers' Guide, 1035
 Shops on Piecework Basis, 981
 Sprague Train Control System, 963*
 Telephone Service, 506†, 525*
 Thefts by Employees, 394, 796, 1319†
 Twentieth Century Limited's Anniversary, 1497
 Veterans' Association, Metropolitan Chapter of, 244
 New York, Chicago & St. Louis:
 Annual Report, 1202
 Clover Leaf Acquired, 725†
 Grade Separation Work, 169*
 New York City:
 Automatic Train Stops in, 395
 Baggage Transfer Rates Reduced, 938
 Perishable Freight, Delivery of, 1354, 1505
 New York City (Continued):
 Postal Buildings, New, 242
 Store Door Delivery, Erie, 233*, 826
 New York Full Crew Law, Efforts to Repeal, 291, 394, 442, 585
 New York Herald on Long Island's Safety Record, 1265†
 New York, New Haven & Hartford:
 Acworth, Sir William, on Earning a Fair Return, 558†, 811†, 1051†
 Annual Report, 1019*
 Claims, Agents to Settle, 796
 Division Accounting, 341*, 435*
 Electric Switching Service, 778
 Fines for Violation of Hours of Service Law, 1351
 Motor Cars, 315*, 474
 Safety on, 395
 Single Phase Equipment, 1477*
 Terminal at Providence, 1467*
 Trains on Time, 347
 New York-New Jersey Tunnel, 840
 New York Passenger Fare Case, 519, 757
 New York Railroad Club:
 Conditions Affecting the Head of a Rail, 237, 293
 Nominations for Officers, 1423
 Simplified Analysis of the Railroad Problem, A, 1011*
 Motor Cars on the New Haven, 474
 Store Door Delivery, 826
 Newspapers, Californian, on Pounding Highways, 480
 New Zealand: Railroad Notes, 847, 1751
 Nichols & Bro.: Protector for Controllers, 703
 Nicholson Thermic Syphon; Spokane International, 977*
 Nicholson Thermic Syphon, Tests of; Central of Georgia, 1625
 Nickel Plate (See New York, Chicago & St. Louis)
 Niles-Bement-Pond Turret Tool Post, 1567
 Noble Collision; B. & O., 347
 Nor Do South America's Roads Escape Adversity, 113*
 Norfolk & Western:
 Annual Report, 881*
 Locomotive Performance with Hanna Stoker, 431*
 Normalcy in Railway Labor Field, Progress Towards, 31*
 Northcutt, W. A., Before Labor Board, 741
 North Dakota Excise Tax Held Invalid as to Interstate Railroads, 248
 North Dakota Rate Case, 397
 Northern Pacific:
 Annual Report, 1293, 1314
 Expenditures in Montana, Proposed, 1035
 Shifting of Bridge Pier Stopped, 1333*
 North Leroy, N. Y.: Derailment of Black Diamond Express; L. V., 1176*
 Northrup Avenue Terminal at Providence; N. Y., N. H. & H., 1467*
 Norway:
 Electric Traction, 1307
 Railway Situation, 95*
 Notebook for Supply Exhibit, 1371†
 Nothing Very New About the Plumb Plan, 581
 Number (See Employee)
 Numerical Numbering System for Materials, 1673
 O
 Objections (See Automatic Train Control)
 Oblomievsky, John J.:
 Russians Seek to Hold Chinese Eastern, 249
 Observations of a Transcontinental Traveler, 583
 Ode on Transportation, Prize for, 840
 Office Organization in Purchasing and Stores Department, 1698
 Officers:
 Bringing the Best Out of Men, 510†
 Classification, Objects to, 393
 Costs, Knowledge of, 1405†
 Fault Finding by Employees, 413†
 Foremen, Selecting and Training of, 1371†, 1403†, 1433†, 1544†, 1576†, 1627†, 1684†
 Learning Railroad Abroad, 211†
 New York Central Veterans, 244
 Pay of Supervisory Officers, 1372†, 1463†
 Secretaries, The, 557†
 Waiting for Someone to Die, 1099†
 Official Goats—The Secretaries, 557†
 Ogden, Utah: Ice Plant, 533*
 Ohio Low Water Alarm, 1621*
 Ohio Society of New York: Schwab, Charles M., Pleads for the Railroads, 243
 Oil Burning Locomotives, Maintaining, 1187
 Oil House at Clifton Forge, C. & O., 958*
 Oil Lamps, Care of, 1712†, 1734
 Oiling of Roadbed: Long Island, 1747
 Oils, Report on Specifications for, 610*
 Oklahoma Service Letter Laws Upheld, 1751
 Old Shop Machinery Limits Output, 307†
 One Big Thing That Is the Matter with the Railroads, 457†
 One Way to Reduce Overtime, 1205†
 Operating Efficiency:
 Branch Passenger Service, 1104†
 Economics of Railway Operation, 709*

Operating Efficiency (Continued):

- Light Traffic an Aid to Constructions, 949†
- Locomotive Engineer on, A, 861†, 1104†, 1161†, 1323†
- Locomotive Operation, Considerations in, 769†
- Speeding Up Car Movements, 411†
- Operating Expense Classification, Proposed Revision of, 1466†, 1473
- Operating Expenses and Train Cost, 1405†, 1409
- Operating Expenses Reduction of, 409†, 1465†
- Operating Income, Seasonal Variation of, 273*
- Operating Oil Burning Locomotive, 1187
- Operating Results (See also Revenues and Expenses) Savings by Rebuilt Power: Akron, Canton & Youngstown, 407†, 423*
- Operating Statistics:
 - Monthly Figures: November, 444; December, 538; January, 842; February, 982; March, 1190
 - Year 1921, 585
- Operating Studies:
 - International & Great Northern, 1347
 - Mexican Railways, 1055*, 1119*
 - Wheeling & Lake Erie, 771*, 829*
- Opportunities of the Auditor, 1746
- Opportunities for Eliminating Hand Labor, 1009
- Opportunity for the A. R. A., An, 860†
- Order (See Equipment)
- Order of Railway Conductors: Annual Convention, 1133
- Oregon Electric Railway: Automatic Substations, 347
- Oregon Short Line: Claim, Thirty Days' Notice of, 588, 724†
- Oregon-Washington Railroad & Navigation Company: Celilo Collision, 1031*
- Organization:
 - Committee Plan The, 1160†
 - Electrical Departments, 1543†, 1575†
 - Purchasing and Stores Department, 1698
 - Service of Supply, 1647
 - Water Service, 765†
- Original Tri-way Universal Machine, 1568
- Orr, H. H., Before I. C. C., 971
- Otis Automatic Train Control, 1626
- "Our Road," 1159†
- Outlook Continues to Grow Brighter, 357†
- Outside Locomotive Repairs (See also Contracts), 1716†
- Overcharge Claims, Time for Filing, 498
- Overtime, Way to Reduce, 1205†, 1713†
- Owning Locomotives, Factors in Business of, 471

P

- Pacific Fruit Express Company: Icing Facilities, 533*
- Pacific Great Eastern, to Investigate, 1082
- Package Freight, Handling; N. Y., N. H. & H., 469
- Package, Perfect, Campaign, 222
- Packing Air Cooled Rod, 1626
- Packing Cup, Wahco, 1461*
- Packing, Headlight Turbine, 1571*
- Packing Rings for King Type Cups, 839*
- Packless End Valve, 1399*
- Paige & Jones Chemical Company: Water Treatment at Wayside Tanks, 1619
- Painesville Crossing Disaster, 555†, 585
- Paint:
 - Buying, 458†, 952†, 1000†, 1101†
 - Silumite, 1402
 - Spraying in Railroad Shops, 724†
- Painting, Economy in, 212†
- Parcel Post Rates, 1192
- Parkburg Iron Company: Boiler Tube Practice, 1678
- Parmelee, Dr. J. H.: Transportation Act, 1172
- Partial Payments (See Guaranty)
- Passenger Car (See Car)
- Passenger Fares:
 - Differential Fares, New York-Chicago, 159
 - Homeseker's Rates Restored, 555†, 587
 - I. C. C. Orders Increasing Intrastate Rates Upheld—Wisconsin and New York Cases, 519, 556†, 757, 776
 - Mileage Book Legislation, 267, 818, 889, 1336
 - Reductions; C. G. W., 446
 - Reductions by Western Roads, 555†, 587
 - "Reductions by Installments," 407†
 - Tourist and Excursion Rates, 999†
 - Tourist and Excursion Services in Great Britain, 163†, 204, 1265†, 1308
- Passenger Service:
 - Cars, Rough-Riding, 908†, 954†
 - Common Sense in Branch Runs, 1104†
 - European Railways, 1205†, 1211
 - Meals for One Dollar; S. P., 291
 - Platforms at Stations, 954†
 - Reducing, 211†
 - Trains On Time, 291, 347
- Passenger Traffic:
 - Excursion Rates in England, 163†, 204
 - Reducing Passenger Train Service, 211†
 - Review of 1921, 20
- Payments, Government, Delayed, 987, 1001†
- Pay (See Officers; also Employee—Wages)
- Peacock Geared Hand Brake, 1425*
- Peculiar Rail Failure, A, 738*
- Pennington, Edmund, Becomes Chairman of the Soo, 1241*

Pennsylvania:

- Advertising Space for Sale, 347
- Annual Report, 857†, 863*
- Contract System, S. M. Felton on; Phil., Wil. & Balt., 949†, 979
- Derailment near Halifax, Pa., 887
- Disputes, Plan for Settling, 484
- Election of Employees, 1302
- Employees, Accidents to, 1033
- Employees' General Athletic Exhibition, 984
- Entrance Into Detroit, 1711†, 1717*
- Fire at Meadows Shops, 981
- Fire Losses in 1921, 537
- Insurance Fund, Railroad's, 1748
- Jones, Mr., and the Dining-Car Business, 537
- Labor Board, Dispute with, 157, 395, 484, 886, 1021 (Court Decision), 1124, 1339
- Lee, Elisha, Addresses A. R. A. Purchases and Stores Division, 1593
- Locomotive Repairs, I. C. C. Report on Contract for, 858†, 867, 1716†
- Order for 250 Passenger Cars, 857†
- Passenger Trains On Time, 291
- Pennsylvania News, The, 212†
- Potato Embargo Cancelled, 1354, 1505
- Rea, Samuel, on College Training, 985
- Refrigerator Traffic, 1035
- Reviewing Committees, Report of, 936
- Safety Message by Radio, 1302
- Shipments of Durant Automobiles, 339*, 748*
- Stop-Over Privilege, 245
- Thawing Shed at South Amboy, 394
- Tractors and Trailer Trucks in Polk Street Terminal, Chicago, 225*
- Women's Aid, 919*, 1748
- Yard at South Kearney, 1248
- Pennsylvania News, The, 212†
- Pension (See Employee)
- Per cent of Bad Order Cars, 950†
- Pere Marquette:
 - Annual Report, 1181, 1203
 - Budget for 1922, 490
 - Posts at Belding, 664*
- Perfect Package Campaign, Results of, 222, 295
- Perfection Sand Drier Stove, 1622
- Performance (See Locomotive)
- Permanency of Pole Lines, 951†
- Permanent Supply Exhibit in Chicago, 1159†
- Perpetuation and Operating Expense, 1011*
- Personnel Problems, Importance of, 1627†
- Peru:
 - Concession, British-Canadian, 450
 - Railroad Notes, 1307
- Pettijohn, Fred: Rate Testimony, 385
- Philadelphia & Reading:
 - Accident near Woodmont (Bryn Athyn), 168†, 173, 357†, 490, 549, 840 (Conductor and Engineman Imprisoned), 1351
 - Bridge Slabs Waterproofed Before Erection, 873*
 - Dissolution Decree to Be Modified, 1306
- Philadelphia, Wilmington & Baltimore: Contract System, 949†, 979
- Philippines (See Manila Railroad)
- Photographs on Commutation Tickets; N. Y. C., 350, 939
- Photography Applied to Study of Track Stresses; St. L. S. F., 916*
- Piecework Dispute; N. Y. C., 1472
- Piecework, Present Status of, 1373†
- Pier, Bridge, Shifting of, N. P., 1333*
- "Pigmy" Type Drills, 1622
- Pile Jetting Tests, Bignell, 1281*
- Piling, Crosstied Cypress; C. B. & O., 730*
- Piling, San Francisco Bay Marine, 272
- Pipe, Pre-Cast Concrete, 706*
- Pipe Wrench, Walworth-Bostong, 1570*
- Piston Bull Ring, Rogatchoff, 1625*
- Pitting and Grooving in Locomotive Boilers, 667†, 690
- Pittsburgh & Lake Erie: Train Robbery, 1747
- Pittsburgh & Shawmut: Operating Results with Motor Cars, 516
- Pittsburgh & West Virginia: West Side Belt, Application for Authority to Acquire Control of, 364†, 443
- "Pittsburgh Plus" Trade Practice, 350
- Plains, Kan., Collision, 1319†, 1332
- Plan for Unified Terminals at Chicago, 1179*
- Planer, Gray Maximum Service, 1568
- Planer, Newton Crank, 1570*
- Planers Outlived Their Usefulness, Have, 1575†
- Plates, Large Size Bailer, 1620
- Plates, Tie, from Rail Steel, 726†
- Platforms at Passenger Stations, 954†
- Plea for the Station Agent, A, 1054†
- Plea for the Traveling Auditor, A, 239
- Plea for the Truck Horse, A, 246
- Plug Valves for Tank Cars, 1565
- Plumb, Glenn E.:
 - Address Before Nat. Civic Federation, 318
 - Loss and Damage Claims and Rebating, 257†
 - Testimony Before I. C. C., 733
- Plumb Plan:
 - "Labor" and the Ananias Class, 1208†
 - Nothing Very New About the, 581
 - Propaganda Against the Railroads, 164†
- Plush Renovator Chase, 1430
- Pneumatic Drills, 1622
- Pneumatic Tools, King, 1542
- Poirier, Charles G.: Testimony Before Senate Committee, 393, 462†
- Poland:
 - Condition of Railways Improved, 398
 - Locomotive Works, First, 990*
 - New Line, 1038*

Poland (Continued):

- Railroad Notes, 298
- Railway Construction by Private Concerns, 250
- Pole Jack, Joyce, 704*
- Pole Lines and Sleet Storms, 1099†
- Pole Lines, Permanency of, 951†
- Poles, Concrete; Pere Marquette, 664*
- Police, Corrupt Railroad, 1319†
- Political Coalition, Labor Leaders Attempt Formation of, 485
- Politics in Canadian Railways, Less, 1065
- Polyphase Motors, 584*, 1186*
- Pooling of Freight Cars Proposed, 481, 508†, 576, 808†, 811†
- Poor, F. A., at A. R. A. Conventions, 1423
- Port of New York: Erie Freight Service, 233*
- Port of New York Authority: Major Church on Motor Truck Highways, 246
- Portland Cement Association: Railway Bureau, 252
- Portraits on Family Tickets: N. Y. C., 350, 939
- Positive Public Relations Work, 723†, 807†
- Possibilities of High Speed Tools, 1205†
- Postal Buildings at New York City, 242
- Post, Brill Renitent, 1397*
- Post Office (See Mail)
- Posters, Safety News-Service; D. L. & W., 587*
- Posts, Concrete Fence, 695
- Potato Embargo; Pennsylvania, 1354, 1505
- Potter, Mark W.: Rates and Wages, 221
- Powell, T. C.: Rate Testimony, 575
- Power & Transport Finance Company, 1251
- Power Brake Investigation, I. C. C., 751, 797, 840, 1213 (Hearing), 1332
- Power Equipment for Maintenance of Way Work, 1009
- Power House at Clifton Forge; C. & O., 955*
- Power Interlocking, Report on, 595†, 613*
- Power of the Railroad Club, 1549, 1577†
- Power Plant, Buda Unit, 703*
- Power Plant Fuel Wastes, 554†, 1433†
- Pre-Cast (See Concrete)
- Prepare for Heavier Business, 1024
- Preservative Treatment (See Ties and Timber)
- President Harding:
 - Address Before Agricultural Conference, 276
 - Careful Crossing Campaign Endorsed, 1302
 - Commissioner General of Transportation Proposed, 273, 345, 389, 424
 - Dinner to Railroad Executives—Voluntary Rate Reduction Urged, 1110, 1227, 1278
 - Firemen's Brotherhood Condemns, 1497
 - I. C. C. Appointments, Senate Delays Confirmation of, 188
 - Labor Conferences, Hoover, 196, 232, 243, 257†, 258†
 - Labor Leaders Plan Appeal, 1476
 - Ship Subsidy Bill, 531, 857†, 902†, 1034, 1505, 1738
- Presidents' Conference Committee (See Valuation)
- Pressed Steel Car Company: Annual Report, 501
- Pressed Steel Mfg. Co. Wins Patent Suit, 292
- Pressure Filter for Dining Cars, 1539
- Price Basis, Buying on, 458†, 1266†
- Prices (See also Cost):
 - Cars and Locomotives, 44*
 - Coal, Rates and Miners' Wages, 726†
 - Coal, Trying to Hold Down, 1209†
 - Freight Rates, 268
 - Labor and Materials, 1433†, 1435
 - Lumber, 45
 - Machine Tools, 1100†
 - Material, 43*, 1435*
- Princeton Foundry & Supply Company: Sand Drier Stove, 1622
- Private and Government Operation, Efficiency of, 409†
- Prizes (See Employee—Cash)
- Problem (See Canada; also Railroad Situation)
- Production, Railway Shop, 506†
- Program of Railroad Construction Needed, 357†, 379
- Progress, How to Successfully Avoid, 1431†, 1685†
- Progress in Automatic Train Control, 1001†
- Progress Towards Normalcy in Railway Labor Field, 31*
- Progressive Motive Power Policy, 177
- Projects Authorized, New, 596†
- Promising Field for Investigation, 1206†
- Promotion for the Secretary, 557†
- Propaganda, German, 1205†
- "Propaganda" Regarding the Railroads, 164†
- Propeller Blower, Coppus, 784*
- "Prosperity Special," The, 1277*, 1352, 1553*, 1579†
- Protecting Records from Fire, 766†, 785*, 902†
- Protecto Weather Stripping, 1542
- Protector, Automatic, for Controllers, 703
- Providence, Terminal at; N. Y. N. H. & H., 1467*
- Provisions for 6 Per Cent Return and Government Loans Expire, 534
- Public Relations Work, 553†, 723†, 807†, 901†, 953†, 954†, 1155†, 1162†, 1745
- Public, The (See also Passenger Service):
 - Advertising in Newspapers, 857†, 888, 889
 - Agents as Railway Spokesmen, 725†
 - Dinner to W. G. Besler, 879*
 - Engineer Can Play a Part, The, 902†
 - Engineer's Name on Cab; St. L. S. F., 807†
 - Faithful Are the Wounds of a Friend, 1266†
 - Give the Facts to, 510†

GENERAL INDEX—Continued

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

Public, The (See also Passenger Service) (Continued):
 Observations of a Transcontinental Traveler, 583
 Mechanical Department and Public Opinion, 1100†
 Public Opinion Can Restore Credit, 535
 Railroad Appreciated, A, 1265†
 Railroads' Hope Lies with, 7
 "Selling" the Railroads, 410†, 457†, 505†, 553†, 723†, 807†, 901†, 953†, 954†, 1155†, 1162†, 1745
 Winburn, W. A., Circular of, 1049†
 Publicity and Annual Reports, 901†, 1157†
 Publicity and the Coal Strike, 1002†, 1104†
 Publicity Possibilities of Radio, 999†
 Public Utilities Commission (See State)
 Pullman Checking Desk; Southern Pacific, 832*
 Pullman Company:
 Hotels at New Orleans, 1189
 Porters' Chorus, 1033
 Reorganization, 252*
 Surcharge, Objects to, 383
 Pulverized Fuel, A Field for, 1683†
 Punitive Overtime (See Railroad Labor Board—Rules)
 Purchases (See also Equipment—Orders):
 Paint, 458†, 952†, 1000†, 1101†
 Price Basis, A, 458†
 Purchases and Stores Division (See American Railway Association: Division VI)
 Purchasing Agents' Office Records, 1674*
 Purchasing Power of Wages, 1720, 1723
 Purdue University's Experimental Locomotive, 797
 Pyle-National Company:
 Locomotive Lighting Equipment, 1572*
 Packing, Headlight Turbine, 1571*

R

Racine Junior Power Hacksaw, 1569
 Radio Application, Railroad, 1372†
 Radio Experiments: D. L. & W., 828, 888*
 Radio Legislation, 1157†
 Radio on Shriners Train; S. P., 1747
 Radio, Publicity Possibilities of, 999†
 Radio, Safety Message by, 1302
 Rail:
 Crossing, Eymon Continuous, 663*
 Failure, A Peculiar, 738*
 Head, Conditions Affecting the, 237, 293
 Production in 1921, 970
 Report of A. R. E. A. on, 712*, 808†, 828
 Segregation, Titanium-Treatment for, 1323†
 Specifications, New, 808†, 828, 929
 Stresses, Photography Applied to Study of; St. L.-S. F., 916*
 Tie Plates from Rail Steel, 726†
 Wear, Study of Rate of, 1206†
 Railroad Administration (See United States)
 Railroad Club, Power of the, 1549, 1577†
 Railroad Committee of Chamber of Commerce, 1560
 Railroad Construction in 1921, 149*
 Railroad Construction Needed, Program of, 357†, 379
 Railroad Labor Board:
 Ability of Carrier to Pay, 460†
 Adjustment, A Much Needed, 307†
 Clerks' Case; C. M. & St. P., 822
 Clerks' Petition for Abolition of, 885
 Clerks, Wage Cut for; C. B. & Q., 740
 Conference in Washington, Hoover, 196, 232, 243
 Consolidation with I. C. C. Urged, 392
 Decisions:
 Clerical and Station Forces, 1504, 1719
 Maintenance of Way Employees, 1268†, 1279, 1320†, 1476
 Miscellaneous, 248, 297, 398, 449, 544, 589, 846, 890, 939, 989, 1037, 1354
 Signal Department Employees, Stationary Engine and Boiler Room Employees, etc., 1504, 1719
 Shopmen's Wages, 1320†, 1337, 1476
 Erie's Contract with Meadville Company, Investigation of, 751
 Felton, S. M., Attacks Estimate of "Savings" Under New Rules, 333
 Hooper, Ben W., Elected Chairman, 1080
 Hooper, Ben W., on Labor Problems, 318
 Illinois Manufacturers Association's Resolution, 396
 Indiana Harbor Belt's Contracting of Repairs, 1111, 1158†
 Interstate Railroad Controversy, 279, 1018
 Jewell, B. M., Attacks Nation's Industrial System, 809†, 821
 Labor Organizations' Requests for Increases, 377
 Legality of Wage Conferences Attacked, 739, 774
 Maintenance of Way Employees' Wages Cut, 922, 1268†, 1279, 1320†, 1476
 Markham, C. H., Pays Tribute to, 984
 Members at A. R. A. Conventions, 1393
 Missouri & North Arkansas Controversy, 440, 460†, 484
 Missouri Kansas & Texas Shop Contracts, 1080, 1125

Railroad Labor Board (Continued):
 National Agreements, T. D. Cuyler on, 467, 524
 New Quarters, 981
 New Rules:
 Clerks, 174, 277, 292, 333, 308†
 Express Employees, 523
 Firemen and Oilers, 485
 Shopmen, 174, 243
 Signalmen, 438
 Stationary Engineers, 820
 Supervisors of Mechanics, 524
 Telegraphers, 485, 566
 Train Dispatchers, 483
 New York Central Piece Work Dispute, 1472
 Pennsylvania Controversy, 157, 395, 484, 886, 1021, (Court Decision), 1124, 1339
 Pennsylvania Outlines Plan for Settling Disputes, 484
 Phillips, Alberts, Not to Resign, 822, 981
 Quarters Moved, 822
 Regional Board of Adjustment, W. G. Bierd Opposes, 220
 Regional Boards of Adjustment Formed, 34
 Shopmen's Wages Cut, 1320†, 1337, 1476
 Should Stick to Facts, 308†
 Testimony of:
 Burchmore, J. S., 1079
 Fitzgerald, E. H., 978
 Higgins, I. W., 563, 565, 739, 819, 922
 Jewell, B. M., 739, 774, 809†, 819, 821, 884, 921
 Libby, J. H., 1081
 Manion, E. J., 564
 Northcutt, W. A., 740
 Walber, J. G., 564, 820, 921
 Warne, Frank J., 884, 921
 Wage Fixing Discussed, 1713†, 1719
 Wage Reduction Dispute Before, 377
 Wage Reductions, Hearings on, 563, 645, 739, 767†, 774, 809†, 819, 821, 884, 921, 978, 1024, 1079, 1268†, 1279 (Decision on M. of W. Employees), 1320†, 1337 (Shopmen), 1476, 1504 (Clerical and Station Forces), 1713†, 1719
 Work of, 27, 1140
 Railroad Problems (See also Railroad Situation):
 Simplified Analysis of, A. 1011*
 Railroad Situation:
 Chamber of Commerce Discusses, 389, 1171
 Dunn, S. O., on, 1743
 Executives Review Prospects for 1922, 5
 Expenditures Should Be Made, 928
 Fiction and Facts About "Weak" and "Strong" Railroads, 359†
 Marked Improvements in, 213†
 Railway Session of the A. S. C. E., 266
 Schwab, Charles M., on, 243
 Suggestions at R. B. A. Dinner, 343
 Worst Year in History, 1†
 Railroad Telegraph and Telephone Activities, 143*
 Railroad Terminal (See also Yards and Terminals), 904†
 Railroad Traffic and Earnings, 1101†
 Railroad Yardmasters of America Disclaim connection with C. G. Poirier, 462†
 Railroad Y. M. C. A.: Fiftieth Anniversary, 1273
 Railroads and Foreign Trade, 808†
 Railroads Profit from Lower Material Costs, 43*
 Railway Accounting Officers Association:
 Annual Meeting, 1265†, 1466†, 1473, 1485*, 1743
 Mandatory Rules, 58
 Revision of Operating Expense Classification, Proposed, 1466†, 1473
 Railway Age March Dailies, Making of, 657
 Railway Age Not Represented at Foreign Trade Convention, 1102†
 Railway and Locomotive Historical Society, 578
 Railway Business Association:
 Annual Dinner, 343
 "Commission Declares Its Independence," 1282
 Commissioner General of Transportation Opposed, Proposal to Create, 390
 General Executive Committee, 841
 Railway Chaos Central Europe's Greatest Problem, 97*
 Railway Club Secretaries Meeting, 1456
 Railway Construction (See Construction, New)
 Railway Development Association of the Southeast: Annual Meeting, 840
 Railway Executives (See Executives; also Association)
 Railway Lines Abandoned in 1921, 147*
 Railway Mail Terminal at Chicago, 513*
 Railway Public Relations Work, 553†
 Railway Shop (See Shops)
 Railway Statistics (See Statistics)
 Railway Supply Exhibit, A Permanent, 1159†
 Railway Supply Manufacturers' Association:
 Annual Meeting—New Officers, 1560
 Committee Appointments, 1686
 Exhibit, 724†, 1371†, 1380* (List of Exhibitors), 1404†, 1406, 1456, 1543†, 1577†, 1608, 1630
 Notebook of Exhibit, Pocket, 1371†
 Officers and Committee Men, 1375*, 1404†
 Rolo-Acme Flanged Locomotive Tank, 1710

Raritan River Railroad:
 Hall Color-Light Signal, 186*
 "M-V All Weather" Train Control, 185*
 Ratchet Hand Brake, Blackall, 1396*
 Rate-Making Provisions (See Transportation Act)
 Rate of Return:
 Acworth, W. M., on Can Railways Earn a Fair Return, 259†, 261, 558†, 811†, 1051†
 Hanauer, J. J., on, 273
 Hayden, Charles, on, 368
 Provision for 6 Per Cent Expires, 534
 Reduction of the "Fair Return," 1267†
 Seasonal Variation of Operating Income, 273*
 Shipping Bill, 902†
 Rates (See also Passenger Fares):
 Agriculture, Relations to, 967
 Coal Prices and Miners' Wages, 726†
 English Railways, 78
 Excursion Rates in England, 163†, 204
 Federal Valley Case, 1750
 French Railways, 83
 German Railways, Increases on, 94
 Hardwood Lumber, I. C. C. Ruling on, 283, 317
 Increased Divisions Ordered for Missouri & North Arkansas, 786
 I. C. C. Investigation, 192, 227, 281, 319, 379 (Herbert Hoover's Testimony), 383, 419, 481, 535 (Information Required), 573, 731, (Hearings Closed), 1110, 1178, 1207†, 1221 (Decision), 1227, 1278, 1282, 1743 (S. O. Dunn on), 1750
 Italian Railways, 85
 Kansas City, Mexico & Orient Asks Increased Divisions, 889
 Kansas Intrastate, I. C. C. Ruling on, 890
 Michigan Public Utilities Commission's Inquiry, 296
 Mileage Book Bill Passed, 267
 New England Divisions, 425, 765†, 798, 845, 1305
 New England Shippers Ask Removal of Baltimore and Philadelphia Port Difficulties, 542
 North Dakota Rate Case, 397
 Passenger (See Passenger Fares)
 Reductions:
 Agricultural Conference's Recommendations, 317
 Agricultural, Maine Roads Not Included in, 295
 Baggage Transfer in New York, 938
 Coal, Shippers Urge Cut on, 281, 295
 Commissioner Potter on, 221
 Cost of Living, Wages and Rates, 358†, 413
 English Railways, 250, 449, 1307
 Face the Problem Squarely, 310†
 Georgia, Freight Rates in, 542
 Grocers, Troubled, 459†
 I. C. C. Prescribes 10 Per Cent Reduction, 1207†, 1221, 1267†, 1282
 Iron, Steel and Ore, 282
 Passenger Fares, 407†
 President Urges Voluntary Rate Reduction, 1110, 1227
 State Commission Rulings, 1750
 Reparation During Federal Control, 936
 Return, a Fair, 259†, 261
 Southern Freight Rates Investigation, 1750
 State Versus Interstate, 183, 368, 395, 396, 516, 519 (Wisconsin and New York Passenger Fare Cases), 556†, 776, 1109
 Texas Intrastate, 1109
 Rating, Tonnage, Checking, 358†
 Ratios of Operation, 19
 Rea, Samuel, on Value of Education, 985
 Reading Dissolution Decree to Be Modified, 1306
 Real Program of Railroad Construction Needed, 357†, 379
 Reasons for Optimism, 596†
 Rebating and Loss and Damage Claims, 257†
 Rebuilding of Galveston Causeway, 1113*
 Recapture (See Transportation Act)
 Recent Tendencies in Locomotive Development, 49*
 Receiverships and Foreclosure Sales During 1921, 134
 Reciprocity in the Upkeep of Crossings, 459†, 812†
 Reclamation of Material, 1657*, 1683†, 1684†
 Reclamation Work, Check Your, 1628†
 Reclaiming Sheets of Outside Metal Car Roofs, 275*
 Record of Carnegie Steel Wheels, 1462
 Records and Accounts, Report on, 686*
 Records, I. C. C. Order on Preserving, 981
 Records, Protection of, 766†, 785*, 902†
 Red Automobile Tail-Lights, 166†, 362†, 1053†, 1345
 Reduce the Cost of Living, 214†
 Reducing Passenger Train Service, 211†
 Reduction of Operating Expenses, 409†, 1465†
 Reduction of the "Fair Return," 1267†
 Reductions (See also Rates; also Railroad Labor Board; also Employee—Wages)
 "Reductions by Installments," 407†
 Reed, Clyde M.: Rate Testimony, 385
 Reflex Water Gate Shutter, 1623*
 Refreshing Breeze From the West, A, 860†

Refrigerator Cars, W. H. Winterrowd on, 1173*
1229*
Regan Train Control, 195, 442, 973
Regional Boards of Adjustment:
Bierd, W. G., Opposes, 220
Formation of, 34
Report of Agricultural Commission on, 1112
Regional Conferences to Adjust Disputes with
Brotherhoods, 232, 243, 257†, 755
Regulation of Securities Under Section 20a, 21*,
27*
Regulator, Milburn Gas, 1427*
Relation of Freight Rates to Agriculture, 967
Relation of Maintenance of Way Department to
Fuel Conservation, 1285
Relays, D. C., Report on, 612*
Religion and Railroad, 412†, 510†, 557†
Relocating Machines in Shops, 857†
Renewal of Terminals, 904†
Renitent Post, Brill, 1397*
Repair Shop and Enginehouse Developments, 63*
Repair Shop (See Shops)
Repair Tracks, Small, Work on, 1371†
Repairs:
Car Repair Work, 1371†
Car Roof Sheets, Reclaiming, 275*
Contract (See Contract)
Cos's in New South Wales and the United
States, 1087
Deferred, Cost of, 215†
Locomotive, I. C. C. Reports on Contracts
for, 858†, 867, 1716†
Scheduling System, Shop, 1403†, 1412*
Shop Equipment, V. Z. Caracristi on, 745*
Reparation During Federal Control, 936
Report (See names of associations; also Bureau)
Reports, Valuation, 904†
Rerouting of Coal Traffic, 1711†
Research, A Department of, 1051†
Research Graduate Assistantships—University of
Illinois, 293
Research Needed, Co-operative, 1404†, 1408
Results of National Perfect Package Campaign,
222
Retaining Valve, Clark, 1428
Return (See Rate of Return)
Revenue Freight Loaded (See Freight Car Load-
ing)
Revenues and Expenses:
Analysis of Statistics for 1921, 119*
Coal Strike and Earnings, 1049†
D. T. & I. in November, 1921, 167†; Decem-
ber, 858†; March 1047†
German Railways, 93*
Indian Railways, 1916-1920, 106
Monthly Detailed Figures: November, 197;
December, 492; January, 752; February,
930; March, 1134; April, 1498
Monthly Summaries: November, 195, 292;
December and Year 1921, 586; January,
797; February, 987; March, 1083, 1189;
April, 1497
Operating and Perpetuation Expenses, 1011*
Railroad Traffic and Earnings, 1101†
Reduction of Operating Expenses, 409†,
1465†
Year 1921, 586
Reverse Gear, Barco, 1624*
Reverse Gear, Simplex, 1572
Review, Chronological, 66
Review of English Railways During 1921, 76*
Review of Italian Railway Situation, 85*
Reviewing Committees, Pennsylvania, 936
Revision of Operating Expenses Classification,
Proposed, 1466†, 1473
Revision of the Transportation Act, The, 1161†
Rings, Jerome Packing, 839*
River Rouge Bridge; Wabash, 407†, 414*
Rivet Buster, Thor Pneumatic, 1568
Roach, H. F.: Photography Applied to Study of
Track Stresses, 916*
Roadway, Report of A. R. E. A. on, 682*
Roberts & Sshaefer Company: Coal Plant,
Electrically-Operated, 666*
Robinson, Bird M., on the Attack on the Trans-
portation Act, 1029
Robinson Connector, 157*
Rock Island (See Chicago, Rock Island & Pacific)
Rods, Locomotive, Alloy Steel for, 257†
Rogatchoff Piston Bull Ring, 1625*
Rolled Steel Wheels for Locomotives, 571*
Roller Bearing Truck, Stafford, 1460*
Roller Bearings for Car Trucks, 1432†
Rolling Tie Plates from Rail Steel, 726†
Roof, Sharon Pressed Steel, 1129*
Roof Sheets, Reclaiming Car, 275*
Rough-Riding Passenger Cars, 908†
Roumania:
American Locomotives Satisfactory, 1205†
Railroad Notes, 1037
Roundhouse (See Engine Terminal)
Rubber Battery Jars for Car Lighting; A. T. &
S. Fe., 554†, 579*
Rudd, A. H.: Standard Highway Signals, 1345
Rules (See also Railroad Labor Board):
Car Service Rules, Principles of, 866
Car Service, M. J. Gormley on, 1000† 1007
Interchange, Recommended Changes in,
1438*
Loading of Freight Cars, 1446*
Mandatory Accounting, 58
Recovery of Excess Income, 334, 796
Signal Maintenance, 601*
Report of A. R. E. A. on, 721*
Russell, F. V.: Suggests Interchange of Railway
Operating Men, 211†

Russia:

American Railway Men in, 312†
Chinese Eastern, Seek to Hold, 249
Condition of Railroads Deplorable, 499
Extent of Ruin and Chances of Recovery,
1048†, 1073
Famine Conditions and Railways, 941
Letter to E. H. Fritch, 656
Railroad Notes, 298, 757
Soviets Demoralize Railway Situation, 91*
Russian Railway Service Corps, 312†

S

Safety Attachment, Hand Brake, 1459*
Safety Brake Shoe Key, Buffalo, 1542*
Safety Car Heating and Lighting Company:
Drive for Car Lighting Generators, 1450
Train Lighting Equipment, 1710
Safety First:
Careful Crossing Campaign, 1302, 1464†
Census of Safety Workers, 242
Highway Crossing Laws, 1047†, 1082 (Vir-
ginia), 1192, 1206† (Tennessee), 1266†,
1747
Illinois Central Advertises Safety, 888
Long Island's Record, 1265†
Management Responsibility, 725†
Meetings with Trainmen, 510†
New Haven, Safety on the, 395
Posters: D. L. & W., 586*
Radio Message, 1302
Record for Year 1921, 825, 903†
Safety Section, A. R. E. A.: Meeting, 1131
St. Albans, Vt., Coal Plant at, 705*
St. John River Bridge; C. P., 1175*
St. Louis-San Francisco:
Annual Report, 1071, 1095
Engineer's Name on Cab, 807†
Expenditures Planned for 1922, 490, 500
Rail Stresses, Photography Applied to Study
of, 916*
St. Louis Union Station, Movies in, 1033
Sand Drier Stove, 1622
Sanding Plant at St. Albans, Vt., 705*
San Francisco Bay Marine Filing, 272
San Francisco, Pullman Checking Deck in, South-
ern Pacific, 832*
Santa Fe (See Atchison, Topeka & Santa Fe)
Sargent-Reflex Water Gate Shutter, 1623*
Save Minutes Safely, 1319†
Saw, Atkins Metal Band, 1402
Saw Blade, Huther, 1569
Scott, Bruce, on Hoch Bill, 1504
Scrap Classification, 1665*
Scrap Reclamation, 1628†, 1657*
Self-Grinding Valve, 1429*
Self-Lowering Jack, Joyce, 1428*
Scheduling System, Shop, 1403†, 1412*
Schwab, C. M., on Railroad Situation, 243
Scotland, Wage Reductions in, 399
Scrap Heap, Study the, 950†
Seasonal Variation of Operating Income, 273*
Seattle, Co-operative Switching at, 1184
Secretary Hoover (See Hoover, Herbert)
Secretary, Promotion for the, 557†
Securities:
I. C. C. Regulation of, 27*
Regulation Under Section 20a, 21*
Sediment Measure for Storage Batteries, 1566
Segregation in Rail Steel, Titanium Treatment
for, 1323†
Selecting Foremen, 1371†, 1403†, 1433†, 1544†,
1576†, 1627†, 1684†
Selection of Special Apprentices, 1578†, 1629†,
1685†
Self-Locking Brake Shoe Key, 1540*
Self-Starting Induction Motors, 748*
Sellers, Wm. & Company, Inc.: Boiler Check
Valve, 1616*
"Selling" the Railroads, 410†, 457†, 505†, 553†,
723†, 807†, 901†, 953†, 954†, 1155†, 1162†
Senate:
I. C. C. Appointments, Delays Confirmation
of, 188
Laws Proposed in, 887
Mileage Bill Passed, Interchangeable, 267
Valuation Bill Passed, 520
Senate Committee on Interstate Commerce:
Copper Bill Hearings, 183, 368, 396
Clerks' Brotherhood Officials Protest Dis-
charge of Freight Inspectors, 330
Hearings, 392, 877, 949†, 959, 1067, 1117,
1339, 1726
Manufacturers Urge Consolidation of Labor
Board and I. C. C., 392
Railroad Inquiry, 195
Railroads Not Returned Self-Sustaining,
949†, 960
Testimony of:
Anderson, J. F., 290
Chapman, H. J., 330
Dermody, J. J., 290
Duncan, C. S., 1067, 1117
Hagerty, Alfred G., 1118
Hines, Walker D., 287
Hunt, H. T., 290
Kruttschnitt, Julius, 925, 959
Lauck, W. J., 960, 1117, 1339, 1726
Loree, L. F., 1726
Lovett, Robert, S., 1339
Manion, E. J., 290
McAdoo, W. G., 327, 371, 392, 409†, 443,
877 and 913 (Daniel Willard's Reply),
925, 959
Poirier, Charles G., 393, 462†

Senate Committee on Interstate Commerce,
Testimony of (Continued):
Walker, C. S., 392
Willard, Daniel, 877, 913
Senator Cummins:
Mileage Book and Freight Rates, 268
Railroads Not Returned Self-Sustaining,
949†, 960
Senator La Follette on Railway Wages, 422
Senator Lenroot: Bill to Standardize Grain Doors,
166†
Senator Robinson: Mileage Bill and Freight
Rates, 267
Separator, Thor Air, 1618
Serbia: Electrification, 298
Service and Morale, Improved, Features of 1921,
47*
Service Letter Laws Upheld, 1751
Service Metal Wheel Gage, 1539*
Service Motor Coach, 1069*
Service of Supply, Organization in, 1647
Sessions-Standard Friction Draft Gears, 1537*
Settlements (See United States Railroad Adminis-
tration)
Sewer Pipe, Pre-Cast Concrete, L. V., 706*
Shantung Railway, The, 307†
Shaper, Hendley Crank, 1567
Sharon Pressed Steel Roof, 1129*
Shaughnessy's, Ccl., Military Career, 362†, 406*
Shearing Machine, Tube, 1568
Shed, Thawing, at South Amboy; Penn., 394
Sheets, Reclaiming Car Roof, 275*
Shifting of Bridge Pier Stopped; Northern Pa-
cific, 1333*
Shipments, Increase and Decrease of, 260†
Shipments of Automobiles to California, 339*
Shippers:
Co-operation in Car Handling, 866
Reductions in Freight Rates Urged, 281
Shipping Board (See United States)
Ship Subsidy Bill, 531, 857†, 902†, 1034, 1505,
1738
Shoemaker Radial Fire Door, 1620*
Shopmen, New Rules for, 174, 243
Shopmen's Wages Cut by Labor Board, 1320†,
1337
Shops (See also Repairs):
Air Separator, Thor, 1618
Car Repair Work, 1371†
Car Roof Reclaiming, 275*
Lease to Outside Company, 347
Equipment Needs—Show the Boss, 807†
Lighting Facilities, 212†
Music at Sacramento Shops; S. P., 490
Old Machinery Limits Output, 307†
Paint Spraying, 724†
Piecework, Present Status of, 1373†
Planer Work, 1575†
Production, 506†
Railway Car, Handicaps of, 529*
Repair Work During 1921, 63*
Relocating Machine Tools, 857†
Report of A. R. E. A. on, 678*
Scheduling System, 1403†, 1412*
Specialized vs. Wide-Range Machines, 999†
Tools, High Speed, 1205†
Wheel Lathe, The, 950†
Short Lines:
Annual Meeting of Association, 1029
"Deficit," I. C. C. Interpretation of, 741
Wage Disputes, 174
Shovel, Bucyrus Caterpillar, 1430*
Shovel, Molybdenum Steel, 924*
Show the Boss, 807†
Shriver, G. M.:
Rate Testimony, 192, 230, 578
Shutter, Reflex, Water Gate, 1623*
Side Bearing Testing Machine, 1462*
Side Frame, Symington Wrought Steel Truck,
1426*
Signal Appliance Association Officers, 1754
Signal Department Employees, Wage Reductions
for, 1504, 1719
Signal Section (See American Railway Associa-
tion)
Signaling (See also Signal Section):
Automatic Stop (See Automatic)
Average Service Life of Units, 649
Block Systems, Different Kinds of, 1712†
Cab Signals in Europe, 926
Construction Work in 1921, 137*
Cost of Delays to Trains, 1265†
Economics of, 623†, 646, 1733
Federal Audible Signal; B. & A., 517*, 558†
Frozen Signals Cause Collision, 1086
Hall Color-Light; Raritan River, 186*
Headlights, Effect of, 600
Highway Crossing Protection, 595†, 604*
Highway Crossings, Standard for, 949†,
1206†, 1345, 1479
Interlocking Units and Values, 655
Interlocking Work in 1921, 137*
Lesson of Seven Collisions 1463†, 1483,
1712†
Light Signals, British Report on, 450
Maintenance, Rules for, 601*
Report of A. R. E. A. on, 636*
Save Minutes Safely, 1319†
Single Tracks, 1099†
Signalmen, New Rules for, 438
Signs, Fences and Crossings, 667†, 693*
Signs, Hopeful, 7
Signs, "Stop" versus "Danger," 1269†
Silicon for Control of Segregation in Rail Steel,
1323†
Silumite Paint, 1402
Silvis, Ill., Scrap Dock; C. R. I. & P., 1665*
Simmen, P. J., Before I. C. C., 973

GENERAL INDEX—Continued

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

- Simplex Reverse Gear, 1572
Simplified Analysis of the Railroad Problem, A, 1011*
Single Phase Equipment; N. Y., N. H. & H. 1477*
Single Tracks, Signaling, 1099†
Sinking Fund to Care for Losses Incidental to Handling of Materials, 1697
Six-Months Guaranty (See Guaranty)
Slabs, Bridge (See Bridge Slabs)
Sleeping Car Service in Europe, 1143
Sleeping Cars; Canadian Pacific, 291
Sleeping Cars Criticized, 363‡
Sleeping Cars, Third Class, in Germany, 399*
Sleeping in Caboose, 1099†
Sleet Storms and Pole Lines, 1099†
Sliding Door Controller, 1462
Slump, Greatest Traffic, 3†, 123
Smith, E. S., a Hero, 1456
Smith, Hoke: Rate Testimony, 733
Snow Storms Paralyze Traffic, 540
Society of Automotive Engineers: Gasoline Propelled Railway Coaches, 1008
Society of Railway Club Secretaries: Annual Meeting, 1456
Soda Ash for Water Treatment, 412‡
Solicitation of Business; A. T. & S. Fe, 751
Some Notes on Railway Refrigerator Cars, 1173*, 1229*
Some of the Hopeful Signs, 7
Some Thoughts on Valuation, 1050†
South Africa:
 Electrification, 398, 1143
 Railroad Notes, 1193
 Railways Progress Despite Deficits, 111*
South America:
 Down, S. G., on Conditions, 1552
 Railway Situation, 113*
 Tie Supply for United States, 743*
Southern Freight Rates Investigation, 1750
Southern Hardwood Lumber Case, 283
Southern Hardwood Traffic Association: Officers, 244
Southern Pacific:
 Annual Report, 1360, 1481*
 Central Pacific, Decision Ordering Separation from, 1296, 1354, 1495
 Commissary Building, Construction of, 347
 Enginemen Sent to Fuel Convention, 936
 Icing Facilities, 533*
 Locomotive, 2-10-2 Type, 1553*
 Meals for One Dollar, 291
 Music at Sacramento Shops, 490
 Pullman Checking Desk in San Francisco, 832*
 Radio on Shriners Train, 1747
 Stock for Employees, 307†, 348
 Valuation of Baggage Compulsory, 446
 Veterans' Reunion, 1248
Southern Pacific of Mexico:
 Service Resumed, 292
Southern Railway:
 Bridge at Cincinnati, 1209†, 1215*
 Hungerford's, H. L., Letter to Cashiers and Clerks, 1034
Soviets Demoralize Already Inadequate System, 91*
Spain:
 Eight-Hour Day, Rulings on, 544
 Railway Situation, 96
 State Co-operation Proposed, 1308
Special Apprentices, 1578†, 1629†, 1685†
Specialized vs. Wide-Range Machines, 999†
Specifications (See also American Railway Engineering Association—Report):
 Castings, Carbon Steel, 1588*
 Materials, 1576†, 1577†; 1586, 1686†
 Oils, 610*
 Paint, Buying, 1101†
 Rails, 808†, 828, 929
 Steel Railway Bridges, 309†, 634*, 1100†
 Tank Car, Effective Date of, 981
Speed (See Train Speed)
Speeding Up Car Movements at Terminals, 411†
Spiral Fluted Tap, Brubaker, 1623*
"Spirit of Transportation, The," 840
Spokane International: Nicholson Thermic Syphons, 977*
Spotting Power Plant Fuel Wastes, 1433†
Sprague, F. J., Before I. C. C., 928
Sprague Train Control System; N. Y. C., 963*
Spreader, Driving Box, 1709*
Springfield, Ill.: D. B. Hanna on Government Ownership in Canada, 1065
Sproule, William, on Separation of Central Pacific from Southern Pacific, 1495
Stafford Roller Bearing Truck, 1460*
Standard Code and Double Track, 459†
Standard Coupler Company: Friction Draft Gears, 1537*
Standard Designs, Report on, 608*
Standard Electric Hoist, 1566*
Standard Gargings Company:
 Lug, Draft Gear, 1618*
 Yoke, Key Connected, 1626*
Standardization:
 Automatic Connectors, 906†
 Engineering, 347, 796
 Equipment in Japan, 103
 Gages of Australia, 107*, 450
 Grain Doors by Law, 166†
Standardization (Continued):
 Highway Crossing Signals, 949†, 1206†, 1345, 1479
 Report of A. R. E. A. Committee on, 637*
 Tools, 673*
Starter, Street Locomotive, 1710
State Commissioners and I. C. C. Confer, 751, 798, 1076, 1109
State Commissions:
 Georgia: Freight Rates Reduced, 542
 New York: Baggage Transfer Rates Reduced, 938
 New York: Photographs on Commutation Tickets, 939
 Rate Reductions ordered, 1750
State Commissions: Michigan: Rate Inquiry, 296
State Co-operation Proposed for Spanish Railways, 1308
State Versus Interstate Rate Regulation, 183, 368, 395, 396, 516, 519 (Wisconsin and New York Passenger Fare Cases), 556†, 776, 1109
States' Rights' Bills, 845
Station:
 Chicago Union, Plans for, 323*, 513*, 554†, 561* (Foundation Tests)
 Waterloo, 941*
Station Agent, A Plea for the, 1054†
Stationary Boiler Plants, 1629†, 1641*
Stationary Engine Employees, Wage Reductions for, 1504, 1719
Stationery Store, Economies in the, 1701
Statistics (See Railway Age, January 7, 1922; also Revenues and Expenses; also Operating Statistics; also Freight Traffic):
 Analysis of, An, 119*
 British Railways, 79
 Freight Tonnage Transported in 1921, 845
 Locomotive Operation, 1902 to 1919, 746
 Rail Production in 1921, 970
 Report of I. C. C. Bureau, 194
 Ties Treated in 1921, 1048†
 Wages in 1916 and 1921, 1208†
 Wages in 1920 and 1921, 122, 888
 Wages, Monthly Summaries of, 122, 242, 442, 755, 888, 1033, 1465†, 1497 (March)
Status of Railroad Accounts with the Government, 39*
Status of the Coal Mining Industry, 1283
Staybolt Machine, Lassiter-Millholland, 1568
Staybolts, Welded Flexible, 1291*
Steam Heat Connections, Barco, 1396*
Steam Railway Accidents in 1921, 825
Steamship Lines:
 President Urges Co-operation with, 531
 Railroads Refuse to Cancel Contracts with, 203, 397, 532
Steel Cars, Harris Bill on, 981
Steel Castings, Specifications for, 1588*
Steel Companies, Merger of, 1352
Steel, Heat Treated, Use of, 1686†
Steel, Rail, Segregation in, 1323†
Steel, Rail, Tie Plates from, 726†
Steel Railway Bridges, Specifications for, 309†, 634*, 1100†
Steel Shovel, Molybdenum, 924*
Steels, Alloy, for Locomotives, 257†
Stock for Employees; S. P., 307†, 348
Stockholders, Rock Island, Letter to, 357†, 367
Stoker (See Locomotive)
Stop-Over Privilege; Pennsylvania, 245
Stop, Train (See Automatic)
"Stop" Versus "Danger" Sign, 1269†
Stops with English Vacuum Brakes and American Westinghouse Air Brakes, 810†, 823*
Storage Battery Jar, Specification for, 609*
Storage Coal (See Coal)
Store Door Delivery:
 England, 758
 Eric Freight Service at New York, 233*
 New York Railroad Club's Discussion, 826
Storehouse at Clifton Forge; C. & O., 958*
Stores Department (See also American Railway Association: Division VI—Purchases and Stores):
 Book of Rules, 1596
 Educating Employees, 1703
 Help the, 1576†
 Needs of the, 1544†
 Organization, 1649
 Turnover of Material, 1628†
Storey, W. B., on Mechanical Convention, 1423
Storms in North Central States, 540
Story of Creosoted Trestles; A. T. & S. Fe, 369*
Stove, Perfection Sand Drier, 1622
Strainer, Air Pump, 1623*
Street Locomotive Starter, 1710
Street Patent—Suit of Locomotive Stoker Company Against Elvin Company, 1351
Stresses (See Track)
Strike (See also Employee; also Coal Strike)
 Threats, 1320†, 1476
"Strong" and "Weak" Railroads, Fiction and Facts About, 359†
Struggle, Another Year of, 4†
Stucki, A., Company: Side Bearing Testing Machine, 1462*
Study the Scrap Heap, 950†
Stumpf Unafflow Locomotive, 1727*
Sturtevant Cab Ventilating Unit, 1074*
Sturtevant Cinder-Separating Fan, 428*
Substitute Highway Crossings, 667†, 694
Sumatra: Adhesion and Rack Locomotive, 263*
Sunbeam Electric Manufacturing Company: Locomotive Headlight, 1573*
Superior Supply Company Chemical Toilets, 665*
Supervisors of Mechanics, Rules for, 524
Supervision of Boiler Plants, 1629†, 1641*
Supervisory Officers, Pay of, 1372†, 1463†
Supply Field (See Equipment)
Supply Train Operation, 1670*
Support Your Foremen, 1576†
Supreme Court (See Legal Decisions)
Surcharge, Pullman Company Objects to, 383
Surplus and Shortage, 1919-1921, 17*
Surplus and Shortage, Weekly Figures of (See Freight Car Loading)
Sweden:
 Diesel-Electric Motor Cars, 1183*
 Electric Locomotives for France, 398
 Railway Situation, 95*
 Turbine Locomotive, 1295*, 1629†
Sweet Bill to Amend Transportation Act, 1192, 1249, 1336, 1464†, 1470
Switching, Co-operative at Seattle, 1184
Switzerland:
 Government Railways Running Tourist Business, 545
 Railways in Year 1921, 88*
 Railroad Notes, 298, 940, 1038
Swivel Butt Coupler, 1395*
Symington, T. H., Company:
 Bolster, Wrought Steel, 1565*
 Farlow Draft Attachments, 1536*
 Journal Box Passenger Car, 1616*
 Side Frame Wrought Steel, 1426*
 Swivel Coupler, 1395*
Symposium on Railway Economics, A., 951†
Syphon, Nicholson Thermic, 977*, 1625

T

- Tail-Lights, Automobile, 166†, 362†, 1053†, 1345
Talmadge Manufacturing Company: Cleveland Low Water Alarm, 1618*
Tank Car Specifications, Effective Date of, 981
Tank Car Valves, 1429*
Tank Cars, Plug Valves for, 1565*
Tank Cars, Report on, 1441
Tank, Flanged Locomotive, 1710
Tank, Old Gunite-Constructed, 666*
Tap, Brubaker Spiral Fluted, 1623*
Target at Which Railroads Should Aim, 1012*
Taxation:
 Acworth, Sir William M., on a Fair Return, 259†, 267, 558†, 811†, 1051†
 Highways and Railroads, 860†
 North Dakota Excise Tax Held Invalid as to Interstate Railroads, 248
Taylor, L. S.: Rate Testimony, 383
Telegraph and Telephone Section March Meeting, 765†, 775
Telegraph and Telephone Work in 1921, 143*
Telegraphers, Rules for, 485, 566
Telephone:
 Communication System, The, 163†
 Construction Work in 1921, 143*
 New York Central, Use of, 506†, 525*
 Pullman Checking Desk; S. P., 832*
 Radio Experiments; D. L. & W., 828, 888*
Telephone Circuits, 727, 728
Templeton Kenly Company:
 Jack Base, 706*
Tennessee, Crossing Law in, 1192, 1206†, 1266†
Tennessee, Kentucky & Northern: Motor Car, White Gasoline, 886*
Tentative Consolidation Plan, I. C. C. Hearings on, 792, 1025, 1731
Tentative Valuations (See Valuation)
Terminal Market Facilities, Report on, 1480
Terminals (See Yards and Terminals)
Territorial Conference Committees, 257†, 258†
Testimony (See Senate Committee; also Interstate Commerce Commission—Rate Investigation; also Railroad Labor Board)
Testing, Electrical, Report on, 623†, 647*
Testing Machine, Pittsburgh Cement, 1622*
Testing Machine, Side Bearing, 1462*
Testing Machine, Trap Door Spring, 1710
Tests:
 Bignell Piles, 1281*
 Dynamometer Car Tests with Feed Water Heaters, 1236*
 Foundations of Chicago Station, 554†, 561*
 "M-V All Weather" Train Control on Raritan River, 185*
 Nicholson Thermic Syphon, 977*, 1625
 Signal Relays, 623†, 647*
 Sprague Train Control System; N. Y. C., 963*
 Track Circuits, 651*, 664*
 Vacuum Brakes in England, 810†, 823*
Texas Intrastate Rates, 1109
Texas & Pacific:
 Accident Near Mineola, 1747
 Collision at Camps, 357†, 374
 Texas, Grade Separation in, 887
 Thawing Shed at South Amboy; Penna., 394
 Thefts—Car Door Fastener, 1014*
Thermic Syphon, Nicholson; Spokane International, 977*
Thermic Syphon Tests; C. of G., 1625

Thermostats, 1399*
 Thom, Alfred P.: Rate Testimony, 734
 Thor Air Separator, 1618
 Thor Rivet Buster, 1568
 Thorne, Clifford:
 Rate Testimony, 731
 Senator, Wants to Be, 903†
 Thornton, Sir Henry on Railway Conditions in Britain, 590
 Thrift Month; C. R. I. & P., 242
 Ticket Clerks, Advice to, 490
 Tickets (See also Passenger Fares):
 Frauds Prohibited in New York, 988
 Portraits on: N. Y. C., 350, 939
 Pullman Checking Desk; S. P., 832*
 Tie Plates from Rail Steel, 726†
 Ties and Timber:
 Car Lumber, Treated, 271
 Creosoted Cypress Piling; C. B. & Q., 730*
 Creosoted Trestles on the Santa Fe, 369*
 Cross Ties, Factors Affecting Cost of Treated, 269*
 Determining the Average Life of Ties, 779*
 Economics of Tie Renewals, 270
 Mill Room Equipment, 408†
 Pole Lines, Permanency of, 951†
 Report of A. R. E. A. on Ties, 623†, 639*
 Tie Production Greatly Curtailed, 322
 Treated Ties, Increased Use of, 1048†
 Treating Plant at Minneapolis, 1063*
 Treating Ties Charged to Maintenance, Cost of, 416, 1003†
 Tropics for Our Tie Supply, 743*
 United Kingdom as a Market, 1039
 Wood Preservation, A. R. E. A. Report on 717*
 Wood Preservers' Annual Convention, 258†, 269*
 Timber (See also Ties and Timber)
 Timber Treating Plant at Minneapolis, 1063*
 Timber Treatment on the Increase, 1048†
 Time for Filing Overcharge Claims Extended, 498
 Time-Limit for Damage Claims, 588, 724†
 Time to Play Fair, 407†
 Time to Prepare for Business, 1024
 Time to Start Work, A. Good, 596†
 Titanium-Treatment for Control of Segregation in Rail Steel, 1323†
 Toilets, Chemical, 665*
 Toledo, St. Louis & Western: Acquisition by Van Sweringen Interests, 725†
 Tollerton, W. J.:
 Address Before A. R. A. Division V—Mechanical, 1404†, 1405†, 1408*
 European Trip, 1378
 Work of the Mechanical Division, 1592
 Tonnage Rating, Checking, 358†
 Tool Post, Turret, 1567
 Tools:
 Buying on a Price Basis, 1266†
 High Speed, Possibilities of, 1205†
 King, Pneumatic, 1542
 Recommended for Standard, 673*
 Top Vestibule Buffing Mechanism, 1459*
 Torch, Milburn Cut-Weld, 704*
 Toronto Electrification Disapproved, 286
 Tourist and Excursion Rates, 999†
 Tourist and Excursion Services in Great Britain, 163†, 204, 1265†, 1308
 Track:
 Maintenance, Contract for, Awarded to A. S. Hecker Co. by Erie, 215
 Report of A. R. E. A. Committee, 671*
 Stresses, A. R. E. A. Report on, 641
 Stresses, Photography Applied to Study of; St. L.-S. F., 916*
 Trackage, Additional, Needed, 999†
 Track Capacity, Increasing, 1099†
 Track Circuit, Miniature D. C., 664*
 Track Circuits, D. C., Report on, 650*
 Track Jack Base, 706*
 Track Material Exports (See Foreign Trade)
 Track Shovel, Molybdenum, 924*
 Tractive Power and Car Capacity, 507†
 Tractor (See Trucks)
 Trade Associations, Secretary Hoover on, 443
 Traffic (See also Freight Car Loading; also Freight Traffic):
 Earnings and Traffic, 1101†
 Five Years of Freight Traffic Growth Is Lost, 15*
 French Railways, 82
 Greatest Slump in History, 3†, 123
 Light, an Aid to Construction, 949†, 1270†
 Report of I. C. C. Bureau, 235
 Rerouting of Coal, 1711†
 Traffic Club of Chicago: Annual Dinner, 295
 Traffic Club of Kansas City: Officers, 396
 Traffic Club of Minneapolis Officers, 396
 Traffic Division—A. R. A., 585
 Traffic Statistics (See also Operating Statistics):
 Monthly Summaries: January, 938
 Year 1921, 498
 Trailer, Elwell—Parker Platform, 1401*
 Trailer, Mercury Freight House, 1400*
 Train Control (See Automatic)
 Train Dispatchers, New Rules for, 483
 Train Dispatcher: Will Religion and Railroad Mix, 412†, 510†, 557†
 Train Dispatching:
 Form 19 vs. 31 Order, 408†, 417, 511†
 Locomotive Engineer Tells How to Improve Operation, A, 861†, 1104†, 1161†, 1323†
 Telephones; New York Central, 506†, 526*
 Train Lighting Equipment, 1432†, 1450*, 1710
 Train Line Connector, Futrell 1536*
 Train of Thought, A, 511†

Train Operating Cost, 1405†, 1409
 Train Order Form 19 vs. 31, 408†, 417, 511†
 Train Robberies, 291, 490, 887, 1189, 1747
 Train Services Board (See Regional)
 Train Service Employees and Railways, 258†, 293
 Train Speed, Economical Freight, 312†
 Train Speeds, British Railway, 1752
 Train Stop (See Automatic)
 Training Men for Promotion, 507†
 Trainmen and the Eight-Hour Day, 461†
 Train-Order Form 19, 408†, 417
 Transcontinental Traveler, Observations of a, 583
 Transportation Act:
 Amending of, A. C. Johnson on, 1161†
 Amendment of Rate-Making Provisions Proposed, 183, 516, 1192, 1249, 1464†, 1470, 1504
 Amendment Opposed, 1248, 1249
 "Fair Return," A, 259†, 261, 558†, 811†, 902†, 1051†, 1267†
 Parmelee, Dr. Julius H., on, 1172
 Provisions for 6 Per Cent Return and Government Loans Expire, 534
 Recapture, Col. W. A. Colston on, 1745
 "Recapture" Provision, Attacking the, 952†
 Return for the Railways (See Rate of Return)
 Revision of, 1161†
 Robinson, Bird M., on, 1029
 Warfield, S. Davies, Warns Against Attacks on, 776
 Transportation Club of New York City:
 Address of Elisha Lee, 1133
 Transportation Division (See American Railway Association)
 Transportation Institution Proposed, 1346
 Transportation Problems (See Railroad Situation)
 Trans-Zambesia Railway, The, 1251
 Trap Door Spring Testing Device, 1710
 "TR" Automatic Induction Motors, 748*
 Traveler on Unsystematic Loading, 1004†
 Traveler, Transcontinental, Observations of a, 583
 Traveling Auditor, Recognition of the, 239, 1054†
 Traveling Engineers' Association: Operating and Maintaining Oil Burning Locomotives, 1187
 Treating Ties (See Ties and Timber)
 Treating Water (See Water Treatment)
 Trend of Freight Traffic, 226*
 Trend of Railway Construction, The, 213†
 Tribute to F. F. Gaines, 1580
 Tribute to John F. Wallace, 668†, 670
 Tropics for Our Ties Supply, 743*
 Troubled Railroads Versus Troubled Grocers, 459†
 Truck Bolster, Wrought Steel, 1565*
 Truck Column, Bradford Boltless, 1428
 Truck Horse, A Plea for the, 246
 Truck Side Bearings, Machine for Determining Frictional Resistance of, 1462
 Truck Side Frame, Wrought Steel, 1426*
 Truck, Stafford Roller Bearing, 1460*
 Trucks (See also Car; also Motor Trucks):
 Baker Company's Types, 1394*
 Clark Gasoline Power-Lift, 1568
 Electric Crane, 1394*
 Elwell-Parker, Low Platform, 1182*
 Elwell-Parker Platform Trailer, 1401*
 Elwell-Parker with Crane, 980*
 Erie Freight Service at New York, 233*, 826
 Mercury Tractor and Trailer, 1400*
 N. Y., N. H. & H. in Freight Houses, 469
 Pennsylvania in Chicago Terminal, 225*
 Yale Electric Crane, 1573*
 Trying Out New Devices, 1431†, 1685†
 Tube Shearing Machine, 1568
 Tube, Stoker Distributor, 1617*
 Tuley, Philip S.: Letter from Commissioner Potter on Rates and Wages, 221
 Tunnel Into an Open Cut: Converting Bessemer & Lake Erie, 1275*
 Tunnel, New York-New Jersey, 840
 Turbine Locomotives, 50, 1295* (Swedish State Railways), 1629†
 Turbo-Electric Locomotive in England, 940
 Turntable Motors, Controller for, 1625*
 Turret Tool Post, 1567
 Twentieth Century Limited, Anniversary of, 1497
 Two-Path Electric Heater, 1398*
 Type B Automatic Lubricator, 1619*
 Type D Radial Buffer, 1620

U

U-C Brake, 1682
 Unafrow Locomotive, 1727*
 Uniform Gage Commission of Australia, 110*
 Uniform General Contract Forms, 687*
 Unified Terminals at Chicago, Plan for, 1179*
 Unifying Railway Gages of Australia, 107*, 450
 Union City, Ga., Derailment at, 751
 Union of Skilled Railway Maintenance of Way Employees, 1082
 Union Pacific:
 Expenditures, Proposed, 929
 Gray, C. R., on Central Pacific, 1496
 Ice-G Facilities, 533*
 Locomotive, Mountain Type, 1325*
 Lovett, R. S., Before Senate Committee, 1339
 Signalmen Sue for Back Pay, 1082
 (See Labor)
 Union Station at Chicago, 323*, 513*
 Union Transportation Co.: White Rail Car, 1125*
 Unions (See Labor)
 Unit Containers, B. F. Fitch on, 468

Unit Costs of Train Operation, 796
 Unit Piling of Materials, 1673
 Unit Safety Bar, 1710
 United States Chamber (See Chamber)
 United States Railroad Administration:
 Accounts, Status of, 39*, 191
 Government Payments Delayed, 987, 1001†
 Liquidation Problems, 1169
 McAdoo, W. G., Defends, 327, 371, 392, 409†, 443, 877 and 1913 (Daniel Willard's Reply), 925 (Julius Kruttschnitt Replies)
 Railroads Not Returned Self-Sustaining, 949†, 960
 Settlements of Claims, Progress of, 427
 Settlements with, Accounting for, 378
 United States Shipping Board:
 Railroads Refuse to Cancel Contracts with Japanese Steamship Lines, 203, 397, 532
 United States Trucking Corporation:
 Erie Freight Service at New York, 233*, 826
 Universal Car and Hose Coupler, 440*
 Universal Hand Brake Attachment, 1461*
 Universal Horizontal Boring Machine, 1568
 University of Illinois:
 Research Graduate Assistantships, 293
 U. S. Light & Heat Corporation:
 Direct Drive, 1451*, 1540*
 Welding Set, 1574*

V

Vacuum Brake Tests in England, 810†, 823*
 Valuation of Baggage Compulsory; S. P., 446
 Valuation of Railways:
 Amendment—Bill Signed, 520, 1336, 1497, 1715†
 Atlanta, Birmingham & Atlantic, 1189
 Boston & Maine, 974
 Chicago, Rock Island & Pacific, 367
 Data, Some Further, 172
 Development During 1920, 36*
 Expenditures for, 348
 I. C. C. Hearings, 195
 Officers, 172
 Report of A. R. A. Signal Section, 649*
 Reports, Use of, 904†
 Some Thoughts on, 1050†
 Tentative Valuations, 432, 1189, 1249, 1330
 Uses of, 337
 Valuation—Recapture—Depreciation, 1745
 Values:
 Boiler Check, Annular Disc, 1616*
 Clark Air Brake Retaining, 1428
 King Sleeve-Type, 1542
 Packless End, 1399*
 Plug, for Tank Cars, 1565
 Tank Car, 1429*
 Vapor, 1541*
 Van Sweringen Group, The, 725†, 1047†
 Vapor System for Passenger Cars, 1541*
 Variation of Operating Income, Seasonal, 273
 Vauclain, S. M., on European Conditions, 911*
 Ventilating Set, Locomotive Cab, 1074*
 Veterans (See Employee)
 Violation of Hours of Service Law, Fines for;
 N. Y., N. H. & H., 1351
 Virginia, A Crossing Law in, 1047†, 1082

W

Wabash:
 Annual Report, 1077
 Bridge, Bascule, at Detroit, 407†, 414*
 Hulson Grates, Service of, 975*
 Water Treatment, 768†, 794
 Wabco Brake Cylinder Packing Cup, 1461*
 Wage Reductions (See Railroad Labor Board)
 Wages (See also Employee; also Railroad Labor Board):
 Supervisors, Officers, 1302†, 1463†
 Wagner Electric Manufacturing Company: Polyphase Motors, 584*
 "Waiting for Someone to Die," 1099†
 Walber, J. G., Before Labor Board, 564, 820, 921
 Wallace, John F., Tribute to, 668†, 670
 Walworth-Bostong Pipe Wrench, 1570*
 Walsh Tie Company: Timber Treating Plant at Minneapolis, 1063*
 Warehouses and L. C. L. Freight Houses, 629
 War Finance Corporation:
 Loans to Railroads, 39*, 191
 39*, 191
 Meyer, Eugene, on Work of, 343
 Warfield, S. Davies:
 Car Pooling Plan, 481, 508†, 576, 808†, 811†
 Transportation Act and Wisconsin Case, 776
 Warne, Frank J.:
 Testimony Before Labor Board, 884, 921
 Testimony Before I. C. C., 419, 1067, 1118
 Wastes in Air Brake Service, 1604, 1685†
 Water and Motor Transport, 1266†, 1271
 Waterloo Station Completed, 941*
 Waterproofing Bridge Slabs; P. & R., 873*
 Water Alarm, Low, 1618*, 1621*
 Water Analysis, A, 1168
 Water Column, Edna, 1617*
 Water Gage Shutter, Reflex, 1623*
 Water Service, An Organization for, 765†
 Water Service, Report of A. R. E. A. on, 667†, 689*, 765†
 Water Transportation, Needs of, 1209†
 Water Treatment:
 Boiler Waters, Interior Treatment of 313†, 364†, 412†, 768†, 794, 907†
 Missouri Pacific Shows Savings, 1188
 Soda Ash, 412†
 Wayside Tank Method, 1619

GENERAL INDEX—Continued

[Illustrated articles are indicated thus*; Editorials thus†; Letters to Editor thus‡.]

- Waterways, President Harding Discusses, 276
 Wayside Tank Water Treatment, 1619
 "Weak" and "Strong" Railroads, Fiction and Facts About, 359†
 Wear of Rail, Study of, 1206†
 Weather Stripping, Protecto, 1542
 Webb Automatic Train Stop Tested on the Erie, 175*
 Webb, George H., Tribute to, 670
 Weeds, Killing, 1010
 Weekly Reports (See Freight Car Loading)
 Welded Flexible Staybolts, 1291*
 Welder, Electric, with Gas Engine Drive, 1430*
 Welding Men Meet, 1557
 Welding, Milburn Torch for, 704*
 Welding Set, Arc, 1569
 Welding Set, U. S. L., 1574*
 West Australian to Build Locomotive, 499
 Western Electric Company: Annual Report, 894
 Western Maryland: Shops Leased, 347
 Western Railway Club:
 Davis, James C., on the Aftermath of the Federal Control Period, 1169
 Education, C. G. Juneau on, 223, 512‡, 1270‡
 Factors in Business of Owning Locomotives, 471
 Locomotive Types, 976
 Western Society of Engineers:
 Crescoted Trestles on the Santa Fe, 369*
 Eliminating Hand Labor, 1009
 Foundation Tests, 554†, 561
 Telephones in Railroad Service, 525*, 506†
 Western Maryland: Strike, 841
 Westinghouse Air Brake Company:
 Air Compressor, 3VS Motor-Driven, 1682*
 Annual Report, 850
 Lubricator, Type B, 1619*
 Tests, American Brake and English Vacuum Brake, 810†, 823*
 Wabco Packing Cup, 1461*
 Westinghouse Electric & Manufacturing Company:
 Annual Report, 1253
 Catenary Hanger, 1617
 Controller for Turntable Motor, 1625*
 Electric Welder with Gas Engine Drive, 1430*
 West Side Belt, Application of Pittsburgh & West Virginia for Control of, 364‡, 443
 Wettling, L. E.: Rate Testimony, 192, 230, 578
 What the Association Can Do, 598*
 Wheel Gage, Service Metal, 1539*
 Wheel Grinding, Car, 1156†
 Wheel Lathe, The, 950†
 Wheeled Platform Trailer, 1401*
 Wheels, Record of Carnegie Steel, 1462
 Wheels, Rolled Steel Trailer, 571*
 Wheeling & Lake Erie: Operating Study, 771*, 829*
 White Gasoline Motor Car, T. K. & N., 886*
 White Gasoline Rail Car; Union Transportation Co., 1125*
 Why the Cupola? 357†
 Widgeon, J. M.: Reverse Gear, 1572
 Will Religion and Railroad Mix? 412‡, 510‡, 557‡
 Willard, Daniel:
 Testimony Before I. C. C., 193, 227, 230
 Testimony Before Senate Committee, 877, 913
 Williams Receding Die Head, 1569
 Winburn, W. A. (See also Central of Georgia):
 Advertisements in Newspapers, 857†, 889
 Window Post, Brill Renitent, 1397*
 Wireless (See also Radio)
 Wireless Communication; N. C. & St. L., 257†
 Wireless Control, T. C. Clark's, 973
 Wisconsin Passenger Fare Case, 519, 556†, 776
 Women's Aid, Pennsylvania, 919*, 1748
 Wood (See Ties and Timber)
 Wood, Fred H.: Rate Testimony, 385, 573
 Wood, Prof. A. J., Promoted, 1550
 Wooden Bridges and Trestles, 719*
 Wooding, B. F., Before I. C. C., 927
 Woodmont Collision; P. & R., 168†, 173, 357†, 490, 549, 840, 1351
 Wood Shovel & Tool Company:
 Molybdenum Steel Shovel, 924*
 Woods Brothers Construction Company:
 Tests of Bignell Piles, 1281*
 Woods Induction Motor, 1186*
 Woodward Lateral Motion Box, 1710*
 Woodworking Machinery, Need of Modern, 408†
 Woodworking Machine, Flexway, 1400*
 Word of Suggestion to the Dictator, 511‡
 Work, Contracting of (See Contract)
 Work of the Labor Board, 2†, 1140
 Work of the Mechanical Division, 1545†, 1547, 1592
 Working Conditions (See Railroad Labor Board—Rules)
 Worst Railway Year in History, 1†
 Wrench, Walworth-Bostong Pipe, 1570*
 Wrong Man Again, The, 1406†
 Wrong Repair Controversies, 1543†
 Wrought Steel Truck Bolster, 1565*
 Wrought Steel Truck Side Frame, 1426*

Y

- Yale Truck and Chain Hoist, 1573*
 Yardmasters Disclaim Connection with C. G. Poirier, 462†
 Yards and Terminals:
 Car Movements, Speeding Up, 411‡
 Chicago, Plans for, 904†, 918, 1179*
 Consolidation of Freight Terminals, 477, 862‡
 Detroit, Pennsylvania at, 1711†, 1717*
 Engine Terminal (See Engine Terminal)
 Mail Terminal at Chicago, 513*
 N. Y., N. H. & H. at Providence, 1467*
 Pennsylvania at South Kearney, N. J., 1248
 Railroad Terminals Come High, 904†
 Renewal of Terminals, 904†
 Report of A. R. E. A. on, 628*
 Tractor Haulage in Pennsylvania's Polk Street Terminal, Chicago, 225*
 Year of Struggle, Another, 4†
 Year, Railroad Developments During the, 9*
 Year, The Worst Railway, 1†
 Y. M. C. A., Railroad: Fiftieth Anniversary, 1273
 Yoke, Forged Steel Coupler, 1460*
 Yoke, Key Connected Coupler, 1626*
 Young Men at the Mechanical Convention, 1431†, 1547, 1592

Z

- Zone Plan of Switching at Seattle, 1184

NEW BOOKS

- Bullinger's Postal & Shippers' Guide, 168
 Design of Steel Mill Buildings, 906
 Earthwork in Railway Engineering, 906
 Electric Arc Welding, 361
 Firing of Locomotives, The, 1051
 Harriman, E. H. A Biography, 1103
 Kidder's Architects' and Builders' Handbook, 810
 Life of George Westinghouse, 311
 Mechanical Appliances for Handling Railway Traffic, 1268
 Modern Tunneling, 905
 Moody's Analyses of Investments, Steam Railroads, 770
 Principles and Design of Foundation Brake Rigging, 362
 Principles of Railroad Transportation, 361
 Proceedings of the American Society for Testing Materials, 214
 Proceedings of the Thirty-first Annual Convention of the American Railway Bridge and Building Association, 1322
 Railroads and Government, 1210
 Railway Accounting Procedure, 1922 Edition, 1716
 Railway Signaling, 260
 Saward's Annual, 1102
 Story of the Rome, Watertown & Ogdensburg Railroad, The, 1322
 Traffic Management, 769
 Transition Spiral, The, 906
 Use of Southern Yellow Pine in Car Construction, 860

ELECTIONS AND APPOINTMENTS

[*Indicates photograph and sketch. †Indicates sketch only.]

- Ablauf, W. F., 849
 Ackley, Griffen S., 352
 Adams, Edward M., 160
 Agnew, S. F., 591
 Aitchison, Clyde B., 247, 448
 Albertson, A. G., 1262
 Alden, Edith J., 898*
 Allard, F. H., 764
 Allen, Arthur, 1686
 Allen, C. E., 1196
 Allen, W. C., 849
 Allison, G. B., 452
 Ambrose, J. H., 998, 1097‡
 Ames, W. C., 943
 Anderson, George T., 256
 Andrew, W. H., 947
 Andrews, C. W., 256
 Auch, Ira S., 1263, 1369†
 Austin, Frank, 162
 Au Werter, I. L., 1196
 Bailey, R. J., 998
 Baird, T. R., 947
 Baker, A. R., 355
 Baker, C. D., 855, 898*
 Baker, George F., 355
 Baker, I. O., 943
 Baker, R. R., 1098
 Baldwin, J. E., 1097
 Bancroft, F., 899
 Barker, B. S., 806
 Barker, F. M., 1262
 Barnaby, C. L., 900
 Barnes, M. E., 501
 Barnes, T. W., 992
 Barr, Walter L., 594
 Barry, J. G., 1196, 1507*
 Barry, T. J., 302
 Barstow, Ralph, 943
 Bastian, A. J., 849
 Bastian, C. F., 452
 Barton, Judge R. M., 1080
 Bates, J. Ross, 591, 801
 Baylor, R. L., 899
 Beach, R. E., 1262
 Beahan, J. A., 255
 Bean, W. K., 947
 Beaumont, J., 625
 Bechtel, S. B., 206, 1041
 Beck, Peter P., 251
 Beeler, V. M., 252
 Beggs, R. J., 1263
 Bell, J. T., 1262, 1318
 Bell, Lewis A., 1262, 1317, 1761*
 Bender, George W., 452, 547*
 Bennett, J. J., 162, 210*
 Bentley, Harry T., 1046, 1098*
 Berghaus, S. C., 1046
 Bernet, J. J., 1262
 Besler, William G., 879*
 Bevans, M. J., 1263
 Bevans, W. H., 551, 1204
 Beymer, W. D., 1204, 1317
 Biehlemer, G. W., 306, 356*
 Bierd, W. G., 1253
 Bingham, H. H., 893
 Birdsall, F. L., 209, 255
 Bishop, R. A., 1762
 Black, J. Nelson, 206
 Blackman, C. S., 1154
 Blackstead, A. P., 894
 Blake, D., 1262
 Blake, Edward, 943
 Blanchard, E. C., 898
 Blatz, W. D., 251
 Bledsoe, Carl F., 352‡
 Bloom, J. G., 1204
 Bock, W. E., 947
 Boettcher, C. K., 304, 455‡
 Bollinger, J. E., 1098
 Bond, D. J., 1761
 Bondurant, H. W., 1097
 Bonorden, H. G., 1262
 Boucher, M. W., 455
 Bourgeois, C. A., 1311
 Bourque, C. S., 899
 Bowen, C. K., 806, 900†
 Bowen, E. L., 162
 Bowen, W. G., 764
 Bower, W. C., 900
 Bowie, A. W., 1253
 Bowles, W. C., 162, 210, 405*
 Bowser, S. F., 206, 1041*
 Bradford, James E., 304
 Bradley, A. C., 1204
 Bradley, G. W., 405
 Bradshaw, George, 551
 Brady, Daniel M., 1089
 Brainard, A. S., 1318
 Brewer, Arthur, 251
 Briggs, E. S., 587, 756
 Brinton, E. R., 356
 Brooks, C. E., 1761
 Brooks, R. A., 1761
 Broom, T., 1762
 Broome, J. W., 897, 998‡
 Brophy, D. W., 1262
 Brophy, G. D., 856
 Brown, A. D., 898
 Brown, A. W., 352*
 Brown, C. B. Jr., 256‡
 Brown, C. L., 1317
 Brown, F. S., 806
 Brown, George A., 246
 Brown, H. H., 405, 551
 Brown, N. F., 256
 Brown, Ralph, 452
 Brown, Robert F., 162
 Brown, W. E., 1317
 Brown, W. P., 591
 Browne, Oliver G., 209
 Bruce, J. Y., 455
 Bryan, John Harvey, 400
 Buchanan, R. E., 255
 Buell, J. A., 1089
 Bunnell, E. H., 1514
 Bunting, G. J., 1317, 1369*
 Burchard, Anson W., 1196, 1711

- Burden, Wesley W., 1253
 Burgess, A. C., 504
 Burns, H. E., 306
 Burns, J. P., 306
 Burtner, J. H., 899
 Butler, G. F., 1369
 Butts, G. B., 304
 Byrne, J. J., 306
- Cadieux, A. H., 306
 Cahill, M. H., 1513
 Cairns, C. A., 587
 Cambell, O. W., 405
 Campbell, J. L., 700*
 Campbell, P. G., 405
 Campbell, S. A., 1702
 Cameron, L. O., 302
 Campe, H. A., 251
 Canning, W. E., 855, 898‡
 Canova, W. R., 305
 Cantrell, F. W., 1262
 Carbine, J. T., 1317
 Carey, H. L., 255
 Carey, James P., 1514
 Carlton, Newcomb, 1041
 Carner, C. E., 998
 Carrithers, C. P., 490
 Carroll, Walter C., 160
 Carry, Edward F., 252*
 Carscadin, Charles A., 1311
 Carson, C. E., 209, 1204, 1262*
 Carter, E. E., 306
 Carter, R. W., 251
 Charles, Howard J., 206
 Chisman, J. R., 1369
 Chouinard, Arthur J., 255, 551
 Chown, A. B., 305*
 Chudleigh, W. L., 210
 Claiborne, C. H., 551, 1204
 Clancey, J. A., 209
 Clapp, George H., 400
 Clark, George H., 1089
 Clark, O. F., 209
 Clark, W. R., 251
 Clarkin, P. W., 1154
 Cleary, William J., 302
 Cleland, A. M., 256, 305*
 Clemens, H. V., 1097
 Close, J. L., 356
 Coffin, Charles A., 1196
 Coffin, G. W. Floyd, 943
 Coleman, J. P., 306
 Coley, F. C., 209
 Collins, G. Fred, 992
 Collister, C. C., 1262
 Colston, W. A., 897, 939, 1097*, 1154, 1262, 1711
 Coman, Wilbur E., 305*
 Conley, J. A., 455
 Connelly, J. A., 206
 Connolly, N. D., 1514
 Conover, J. S., 1154
 Cook, Howard, 943
 Coppethwaite, H., 1370
 Cotsworth, Albert, 209
 Cotter, John J., 1264
 Cotterell, C. A., 405
 Cotton, W. A., 547
 Councilman, H. J., 209
 Countryman, M. L., 551, 897, 898*
 Coverdale, W. H., 210, 306*
 Cowin, J. J., 1262
 Cox, C. R., 893
 Cox, E. H., 504
 Cox, J. S., 455
 Cox, O. W., 1369
 Craft, Edward B., 849
 Crawford, David A., 252, 302*
 Crawford, J. B., 998
 Creager, C. H., 210
 Creamean, W. F., 251
 Crocker, W. G., 405
 Croll, B. M., 947
 Crouse, J. L., 251
 Crowder, W. F., 1263
 Cudahy, Michael F., 352
 Cullen, T. P., 1514
 Curtis, G. W., 1154
 Custer, T. F., 1262
- Dailey, C. C., 1263
 Dallman, O. H., 1253
 Darneal, T. L., 899, 947
 Davidson, G. A., 806
 Davidson, M. C., 400
 Davis, Everett D., 899
 Davis, J. M., 1379‡
 Davison, C. C., 1262
 Dawson, J. B., 900
 Day, J. A., 1262
 Dayton, W. L., 306
 Deabler, C. O., 206
 Deacon, W. H., 405
 Dearborn, R. C., 756, 937‡, 998
 De Camp, R. P., 255
 De Forest, Robert W., 355
 Denney, C. E., 1262
 Dennis, R. A., 1506
 Depue, G. T., 855*
 Dewey, C. L., 501
 Dewey, Stewart J., 452, 455
 Dewson, E. H., 301*
 Dietz, Carl F., 251
 Dike, H. B., 1368*, 1762
 Dinkelman, Hans, 298
 Disher, H. H., 948
 Dodd, Theodore L., 992
 Donaldson, J. C., 251
- Donaldson, W. L., 1263*
 Donohue, James J., 1204
 Dorety, F. G., 897‡
 Dornblaser, G. E., 255
 Dougherty, F. P., 295
 Dougherty, William E., 943
 Downs, L. A., 157
 Dressel, F. W., 1310*
 Dresser, F. J. C., 591
 Driscoll, H. D., 756
 Dudley, I. W., 295
 Duffy, James B., 306*
 Duncan, A. S., 849
 Duncan, J. M., 1196, 1311*
 Dunn, G. T., 1370
 Dupue, G. T., 806
 Durham, E. C., 209
 Durrell, D. J., 356
- Earley, H. J., 1369
 Eberhardt, O. L., 206
 Edwards, George R., 498
 Ehrke, John, 551
 Elliott, J. H., 939
 Elmer, J. D., 947
 Elsey, Charles, 209‡
 Emerson, J. B., 162
 Etter, W. K., 855, 897, 898*
 Eva, C. H., 1262
 Evans, John, 1098
 Evans, M. A., 1506
 Evens, J. W., 405
- Fairlamb, J. F., 1154, 1204‡
 Farmer, C. F., 1263
 Fay, Thornwell, 155
 Feeley, W. L., 947
 Feiker, F. M., 292
 Feldes, R. A., 1514
 Fenley, W. N., 993*
 Fernstermaker, D. C., 406, 456‡
 Ferstet, W. S., 356
 Finegan, Eugene B., 947‡
 Finley, J. B., 806, 897*
 Fish, I. L., 947
 Fisher, C. D., 947
 Fitzgerald, R., 1513
 Fitzsimmons, E. S., 760*
 Flanagan, Henry, 255
 Flett, T. R., 551
 Flint, C. B., 1146
 Flynn, P. J., 1262
 Folsom, J. R., 1097
 Forster, J. G., 352‡
 Fowler, H., 893
 Fox, F. C., 855, 898
 Fox, John F., 1262
 Frank, J. W., 998
 Fraser, D. V., 504
 Fraser, J. D., 209
 Frick, O. H., 1046, 1369‡
 Friend, Robert O., 1146
 Fritz, Lucius A., 1146
 Frogner, J. A., 356
 Fromm, A. B., 1514
 Furlong, L. A., 1089
- Gaines, E. H. Jr., 456, 552‡
 Gardner, C. W., 1761
 Garrigues, H. H., 998
 Gavin, F. J., 355
 Gehlert, S. R., 897
 George, Z. T., 405
 Gersbach, O. H., 1514
 Gidding, H., 998
 Gilbert, L. D., 209
 Giles, G. S., 594
 Gilkey, H. S., 1089
 Gillis, H. W., 455
 Gilroy, P. B., 943
 Glaesner, Harry, 1311
 Goldstein, Dr. I. M., 156
 Goodrich, L. A., 551
 Goodwin, James E., 1204
 Graham, W. R., 1204
 Grande, Julian, 156
 Graul, W. H., 206
 Gray, Archibald, 210, 305‡
 Gray, George, 302
 Gray, Wallace H., 452
 Green, George H., 801*
 Green, H. D., 947
 Griffin, M. T., 156
 Griffith, B. W., 1370
 Griffith, G. E., 295
 Griffiths, E., 162
 Griffiths, E. S., 1089
 Groseclose, A. M., 542
 Grubbs, C. W., 1262
 Grummett, A. J., 455, 900‡
 Gunnell, C. F., 998
 Guy, H. D., 1154
- Haas, Erwin M., 547
 Hadlow, H. R., 591
 Haff, Frank E., 304
 Hagman, R. I., 897
 Haines, Winfield S., 1761
 Hale, W. T., 355
 Haley, R. C., 893*
 Hall, Eldred Byron, 1046, 1098*
 Hall, Henry C., 247
 Hall, W. S., 551
 Hallberg, David T., 160*
 Halporn, A. D., 1357
 Halsey, W. W., 992
 Hamilton, C. J. Jr., 992
 Hammer, B. H., 209
- Hammer, F. D., 1762
 Hampson, F. W., 498, 504, 551
 Hampten, H. A., 1154
 Hance, A. R., 352
 Handy, Mrs. Helen M., 551
 Hang, E. L., 1089
 Hanger, G. W. W., 939, 1080
 Hannaford, L. M., 355
 Hannah, Mack, 501
 Hannauer, George, 1513
 Hansen, E. B., 591
 Harden, R. C., 1262
 Harding, R. L., 591
 Harkness, L. A., 1317, 1369*
 Harlow, E. H., 455
 Harmon, Webster E., 356
 Harris, J. J., 405
 Harshbarger, E. M., 1379‡
 Hart, W. M., 490
 Harter, Charles, 356
 Hartshorn, C. R., 856
 Harvey, Alvin Chase, 162‡
 Hasenbalg, A. J., 1046
 Hasendahl, Walter, 206
 Hassett, W. H., 1311
 Hasson, John N., 394
 Hastings, Paul P., 1263, 1762*
 Hatfield, H. P., 203
 Hawthorne, F. M., 504
 Hayden, J. R., 1263‡
 Hayes, E. F., 551
 Hayes, Ross F., 452, 547*
 Haynes, J. P., 1034
 Haynes, Winfield S., 806
 Haywood, William, 504
 Hebard, W. F., 992
 Heed, Thomas D., 162, 209*
 Hegel, G. W., 1762
 Hemingway, A. T., 993
 Hendershot, B. L., 1145
 Henry, Robert S., 255*
 Herbert, T. C., 504, 594
 Herlihy, J. J., 210
 Herrman, B. W., 1369
 Hesser, Albert A., 355, 356‡
 Heusner, Rufus D., 899
 Hewes, C. A., 1370
 Hewes, J. Jr., 210
 Hickling, F. G., 894
 Hicks, R. C., 255
 Higginbottom, W. C., 305
 Hill, J. B., 998, 1046‡
 Hill, J. F., 900
 Hines, Walker D., 504
 Hix, A. W., 1046, 1204*
 Hoag, E. C., 162
 Hobbie, A. D., 1310*
 Holcomb, J. R., 947
 Holmes, G. W., 948
 Holt, C. W., 452
 Holt, Leroy, 302
 Hooker, Fred, 1263
 Hooper, Ben W., 1080
 Hoops, E. L., 900
 Hopkins, L. P., 947
 Horton, T. P., 764
 Houston, J. S., 455
 Houston, P. D., 355
 Howard, D. L., 1262
 Howard, F. C., 900
 Howard, S. P., 806
 Howley, T. F., 406
 Howles, N. C., 1357‡
 Hoyt, Elton, 1089
 Hudson, A. H., 1089
 Hughes, J. J., 206
 Hughes, L. J., 1204
 Hughes, W. T., 1317, 1368*
 Hundley, J. R., 764
 Huntington, C. C., 210
 Huntington, C. W., 455
 Huntington, G. R., 1204, 1241*
 Huntsman, H. N., 1762
 Hurkett, S. C., 210
 Huse, W. A., 1369
 Hutchings, F. W., 893
- Ingram, G. F., 899, 900*
 Irvine, R. Tate, 1262
 Irving, Elmer, 900, 948*
 Irving, T. J., 806
 Isaacson, Frederick A., 356
 Israel, H. A., 1370
- Jackson, A. H., 1507*
 Jackson, J. F., 1369
 Jackson, M. Roy, 1357
 Jackson, William J., 162, 181*
 James, Charles, 547, 552, 806
 James, A. L., 897
 Jarvis, H. E., 855, 898
 Jefferson, C. E., 162, 210, 405‡
 Jewett, Dr. F. B., 849
 Johnson, A. S., 405
 Johnson, C. W., 302
 Johnson, R. D., 455
 Johnson, S. A., 947
 Johnson, Wm., 1262
 Jones, G. H., 160
 Jones, F. W., 1369, 1762
 Jones, George W., 1262
 Jones, H. L., 849
 Jones, H. R., 1089
 Jordan, C. A., 209
 Joy, P. W. S., 305
 Juett, Henry D., 306‡
 Juel, G. L., 162
 June, J. G., 162
- Kahrs, H. H., 504
 Kavanaugh, J. P., 356
 Kelley, E. M., 551
 Kelley, F. M., 1262
 Kellogg, F. L., 352
 Kelly, J. F. Jr., 352
 Kenniff, Thomas J., 1317, 1369, 1370‡
 Kensing, H. C., 894
 Kettering, W. R., 1368‡
 King, William, 210, 255
 Kingsbury, F. J., 251
 Kinney, F. E., 1098
 Kirk, E. G., 1262
 Kirkland, D. F., 1204
 Kirkpatrick, J. C., 1089
 Kloetzer, Ottmar, Jr., 206
 Knobeloch, W. F., 256‡
 Krehbiel, P. O., 1357
 Kreig, C. W., 1089
 Kroeck, C. P. J., 352
 Krohn, Frederick W., 162
 Kuhlman, Fred J., 1357
 Kuska, Val., 998
 Kyle, C. C., 764
- Lake, C. S., 1368, 1513*, 1761
 Lambert, J. H., 806
 Lambert, M. B., 251
 Lamborn, Leslie G., 1041
 Landreth, John P., 801*
 Langenbach, E. A., 1089
 Lanning, H. H., 256
 Lantry, T. H., 898
 Laret, A. H., 1514
 Large, Arthur W., 1369
 Larmour, R. E., 210
 Lassiter, C. K., 1041
 Lavis, F., 943
 Lawler, E. J., 405
 Lawrie, O. A., 943
 Leavitt, E. S., 306
 Lehde, Pendleton E., 501
 Lemme, A. W., 1379‡
 Lend, Richard B., 1317
 Leonard, Albert J., 206
 Leonard, A. J., 1762
 Leppa, J., 405
 Le Preau, F. J., 625
 Lewis, E. L., 448
 Lewis, E. L., 899*
 Lewis, J. W., 251
 Liddle, Charles A., 252*
 Light, J. E., 899
 Lincoln, Robert T., 252
 Lindley, E. C., 504, 551, 897
 Linheimer, S. W., 943
 Little, B. A., 1514
 Lively, H. T., 405
 Long, C. H., 251, 501
 Long, L. H., 806‡
 Lord, J. F., 1514
 Love, J. I., 1262
 Lovejoy, J. R., 1196
 Lovell, F. Hallett, Jr., 1310
 Loweth, C. F., 1747
 Loyall, G. R., 455
 Loyd, F. R., 405
 Ludlow, A. R., 1311
 Lund, George E., 594
 Lupton, G. W., 897, 1097*
 Lydon, J. J., 1253
 Lyford, Will H., 162, 255*
 Lynch, E. D., 251
- McBean, W. H., 947
 McCabe, J. W., 1754
 McCartney, John D., 162
 McChord, J. H., 1204
 McClellan, William, 591
 McClure, J. C., 806
 McClymonds, J. W., 504
 McConnell, John, 547, 1089
 McCoy, C. D., 302
 McCoy, H. B., 356
 McCune, J. G., 301*
 McDonald, A., 1154
 McDonald, J. A., 856
 McDowell, Robert, 856
 McEvoy, Harry K., 947
 McGarry, J. T., 452
 McGee, H. E., 405
 McGill, J. A., 594
 McGraw, M. J., 900
 McGregor, C. J., 943
 McGrew, John A., 594‡
 McIntosh, G. R., 998
 McKay, Col. Douglas I., 1434‡
 McKay, E. W., 756
 McKendrick, J., 1154
 McKenzie, J., 1263
 McKillop, R., 504
 McKinley, T. W., 1262
 McLeod, R. M., 1262
 McMaster, W., 1762
 McMichael, Alan, 255
 McNeill, J. A., 1154, 1263‡
 McPherson, J. C., 209, 304*
 McPherson, W. G., 210
 McWilliams, C. M., 209
 Machovec, E. E., 856
 Mahaffie, Charles D., 939
 Maher, N. D., 455
 Mahon, John V., 1369
 Maley, R. C., 591
 Mallette, W. B., 1145
 Mallory, J. M., 1369
 Mansfield, Frank P., 206

ELECTIONS AND APPOINTMENTS—Continued

[*Indicates photograph and sketch. †Indicates sketch only.]

- Mansfield, J. D., 210
 Marsh, G. H., 1262
 Marshall, Harry B., 253*
 Marshall, John A., 1204
 Marshall, R. S., 1761
 Marshall, W. W., 406
 Martin, A. M., 998
 Martin, E. L., 406, 1318†
 Martin, F. V., 356
 Mathews, Fred, 849
 Mathews, W. E., 1196
 Matthews, Edward J., 206
 Maury, Philip L., 1311*
 Mayo, E. E., 1154
 Mayo, Kenneth, 855
 Mead, L. W., 1357
 Meisel, B. W., 625
 Mello, A. J., 806, 900*
 Meredith, J. A., 1506
 Merrill, A. S., 992
 Merritt, B. S., 455, 551‡
 Merritt, G., 1262
 Messick, Charlton, 504, 551*
 Metzger, Dr. F. J., 1311
 Meyer, A., 1089
 Meyer, C. E., 1357*
 Meyer, H. R., 162
 Michelson, M. A., 1262
 Millard, C. J., 899
 Millard, William H., 356
 Miller, R. C., 900
 Miller, W. H., 849
 Milligan, H. F., 551
 Milliken, Col. James, 400†
 Milner, B. B., 156, 251, 1535
 Minor, James A., 855
 Minton, J. H., 591
 Mintz, H. A., 1317, 1370
 Mitchell, A. G., 998, 1046*
 Mitchell, Henry S., 1368, 1762*
 Mitchell, J. M., 1154
 Mitchell, J. S., 206
 Mitzener, L. A., 1317, 1370
 Molloy, J. H., 1098
 Montgomery, H. M., 992
 Mooney, W. M., 355, 455‡
 Moore, C. D., 1357
 Moore, F. G., 1089
 Moore, Howard K., 893
 Morley, Frank M., 400‡
 Moorman, J. L., 209
 More, J. K., 756
 Morgan, B. E., 1262
 Morris, E. E., 256
 Morrison, George F., 1196
 Morse, G. G., 304
 Morton, J. J., 210
 Moses, J. F., 356, 455
 Moth, G., 406
 Mottz, P. S., 356
 Mudge, Burton, 160*, 206, 1311
 Munger, W. E., 205
 Murphy, C. W., 1263
 Murphy, J. S., 1317
 Murphy, M. C., 1097
 Murray, W. B., 1310, 1357*
 Muttter, W. W., 1754
- Nash, Elliott E., 1506*, 1513, 1761
 Naylor, C. R., 352
 Neal, W. B., 893
 Neelley, D. A., 1262
 Neithercut, R. I., 251
 Nelson, A. E., 893
 Nelson, A. W., 1762
 Nelson, C. B., 1514
 Nelson, C. J., 209, 256*
 Nelson, R. M., 1046, 1263‡
 Nelson, William Ely, 1357
 Nelson, Wm. N., 256
 Nero, G. H., 1097
 Nevins, F. J., 406, 456*
 Newell, M. E., 1154, 1263‡
 Newman, J. L., 1311
 Nichols, D. E., 209, 405
 Nicholson, Frank G., 162, 209‡
 Nickerson, G. H., 764
 Nigg, Frank G., 899
 Niven, E. A., 943
 Nordholm, L. E., 1098
 Northam, B. L., 1370
 Norton, C. E., 1262
 Norton, C. H., 256
 Norton, H. E., 355
 Noyes, A. W., 947, 1097‡
 Nutt, J. R., 1262
- Oakley, E. G., 251
 O'Brien, J. E., 356
 O'Brien, T. P., 452
 Ochse, William, 849
 O'Connor, E. P., 256
 O'Connor, J. S., 1754
 Odell, C. G., 1754
 O'Hara, Charles, 352
 Ohlson, O. F., 209
 O'Leary, D., 159
 O'Meara, T. J., 501
 O'Neill, C. J., 305
 Onyon, I. J., 1262
 Orland, B. A., 162
 Osterhout, E. D., 899*
- Owen, A. T., 899*
 Owen, E. W., 756
 Paige, Fred O., 1146
 Paige, Fred O., Jr., 1146
 Painter, C. R., 1370
 Parker, L. M., 490
 Parmelee, Dr. Julius H., 155
 Parsons, Robert S., 1317*
 Patterson, J. H., 405
 Paul, Dan, 849
 Payne, J. L., 155
 Pearce, Roy, 947
 Pearce, W. D., 1262‡
 Pearson, A. L., 1357
 Peck, Eugene M., 856
 Peckett, Leonard, 943
 Pelnar, A. R., 405
 Pelton, E. T., 943
 Pence, William D., 760
 Penick, W. M., 504‡
 Penn, E. E., 405
 Pennington, Edmund, 1241*
 Pennington, F. E., 1369
 Perkins, J. E., 993
 Perry, Joseph H., Jr., 1357
 Persels, Bert R., 551
 Peschard, M., 155
 Peters, F. W., 405
 Peters, Ralph, Jr., 855
 Peterson, Carl H., 206
 Petersson, Bror Viktor, 1519*
 Pewters, J. F., 455
 Pfisterer, Walter R., 1310
 Phalen, Frank, 1357
 Phelan, J. B., 998
 Phenix, P. S., 1263
 Phillips, Albert, 822, 981
 Phillips, Ralph E., 943
 Pierce, R. A., 1761
 Pierce, Robert I., 446
 Pinion, G. H., 1154
 Pitman, F. H., 1369
 Platten, John W., 162, 255*
 Pleasanton, F. R., 1089
 Polderman, D., Jr., 591
 Pollak, L. L., 1310
 Poor, Fred A., 1311, 1423
 Poronto, H. E., 1513, 1762
 Porr, T. B., 899
 Powell, M. W., 352‡
 Powell, W. G., 306
 Pratt, Alfred E., 253*
 Pratt, D. W., 547
 Preikschat, A. W., 1041*
 Prewett, J. D., 162
 Pritchett, K. S., 209
 Puette, J. P., 947*
 Pugh, William, 900, 947*
 Pumphrey, C. H., 1263
 Purdy, F. S., 1514
 Purkhiser, J. B., 209
 Purvis, H. W., 1204‡
 Pyeatt, J. S., 155
- Quayle, Robert, 1046, 1098*
 Quigg, W. H., 1749
 Quinn, T. B., 209
- Rader, C. B., 845
 Ragel, William A., 162
 Ragsdale, A. K., 764
 Ramsdell, A. B., 1367*
 Randall, I. N., 504
 Randall, M. W., 1311
 Rankin, Joseph, 405
 Raynes, A. J., 162‡
 Rear, G. W., 856, 948*
 Rebard, E. M., 162
 Reeder, G., 156
 Reece, A. N., 210, 256‡
 Reed, Joseph, 849
 Reed, S. G., 162‡
 Reeves, Jonathan P., 162
 Reilly, P. T., 1262
 Replogle, J. Leonard, 943
 Reynolds, E. T., 899
 Rice, C. R., 1262
 Rice, E. W., Jr., 1196
 Richardson, R., 246
 Richart, B. S., 305
 Riley, S. B., 1318
 Ripley, C. T., 256
 Ristine, John D., 547
 Robbins, F. G., 1306, 1317*, 1711
 Roberts, H. H., 943
 Robinson, Charles R., 160
 Robinson, J. Curtis, 542
 Robinson, P. T., 210
 Robinson, W. F., 1041
 Rodger, J. H., 1456
 Rogers, H. K., 1262
 Rogers, S. A., 210
 Romine, W. E., 405
 Rohrer, F. F., 251
 Rooney, F. A., 1370
 Roquemore, J. P., 1370
 Rosser, F. W., 1514*
 Roth, J. C., 1306
 Runnells, John S., 252*
 Russell, L. T., 352
 Russell, T. O., 504
 Russell, W. A., 1311
 Rutherford, W., 301
- Rutter, F. M., 504
 Ryan, Robert E., 1513, 1761*
 Ryan, W. J., 203
- Sackbauer, L. A., 551
 Salter, S., 1762
 Sampson, F. F., 352
 Saunders, W. H., 1145
 Saurman, Atlee B., 251
 Schalchlin, George W., 943, 992*
 Schlafge, William, 547, 552
 Schneider, E. O., 251
 Schoff, W. W., 162
 Schurch, John F., 1311*, 1375*
 Scott, C. M., 806*
 Searcy, James J., 206
 Seeley, Warren L., 947
 Seidle, N. R., 1506
 Sesser, John C., 1368
 Seward, A. M., 998
 Sexton, J. R., 856
 Seybold, R., 251
 Shaftoe, C. M., 1204
 Shakespeare, J., 1262
 Shanks, A. B., 405
 Shaughnessy, C. P., 1097
 Shave, S. R., 894
 Shaver, A. G., 625, 1089
 Shea, J. M., 455
 Sheehan, James B., 1154*
 Shelah, Edward, 1762
 Shepard, F. H., 251
 Sherman, J. K., 900
 Sherwin, John, 1262
 Shoemaker, C. A., 1204
 Showalter, W. C., 898
 Shwab, George A., 355
 Sicardi, Edward T., 542
 Siefer, F. M., 900, 1154
 Simmon, K. A., 251
 Simpson, F. C., 1370
 Sinclair, I. B., 998, 1318*
 Siple, Louis W., 1196
 Sivryer, F. L., 1311
 Skinner, C. E., 802‡
 Slawson, James H., 1311
 Small, Harold R., 1262
 Small, W. T., 305
 Smirl, A. P., 455, 504‡
 Smith, A. B., 209, 256, 356‡
 Smith, A. H., 1513
 Smith, C. U., 1046
 Smith, D., 899
 Smith, E. S., 1456
 Smith, H. B., 252
 Smith, H. E., 1263
 Smith, H. F., 305
 Smith, H. S., 209
 Smith, J. W., 1514
 Smith, John A., 210
 Smith, Sydney, 1204
 Smith, W. C., 356, 406*
 Snider, G. N., 255
 Snider, J. Noble, 255
 Snow, M. G., 1311
 Snyder, C. L., 947
 Snyder, Harry B., 1357
 Snyder, J. H., 1098
 Snyder, P. M., 1154
 Sommers, J. M., 405
 Speight, G. C., 899
 Spencer, C. H., 1262
 Sponseller, R. J., 356
 Spooner, M. A., 209
 Spoor, J. A., 1762
 Stackpoole, O. T., 1262
 Stafford, F. B., 1263
 Stager, Oscar W., 899
 Standiford, Frank H., 594
 Stanley, H. W., 304, 404*
 Stanley, W. L., 1513
 Staples, Charles F., 448
 Starke, C. M., 594
 Stauffer, M. H., 206
 Stedman, B. P., 210
 Stein, Charles H., 355*
 Stephenson, D. C., 899
 Stevens, C. G., 209
 Stevens, D. F., 855
 Stevens, J. E., 162
 Stevenson, Barton, 894
 Stewart, M. D., 1370
 Stigler, H. W., 1204
 Stinemetz, W. R., 251
 Stinson, John T., 1097
 Stoffel, T. H., 251
 Stokes, Walter, 355
 Stone, E. H., 899
 Stone, Frank B., 1145
 Stout, H. N., 209
 Stout, S. E., 591
 Streyer, J. A., 255
 Stripe, W. C., 302
 Stroud, E., 1761
 Strunk, C. L., 446
 Stuart, William H., 1262
 Sullivan, H. G., 455
 Sullivan, J. G., 394, 1082
 Summerfield, V. P., 1317
 Summerhays, W. A., 162, 210*
 Swope, Gerard, 1196
 Sykes, J. P., 1311
- Taliaferro, R. M., 209
 Taylor, J. E., 255, 304‡
 Temple, Arthur, 209
 Temple, L. E., 1370
 Templeton, Ralph, 1357
 Thacker, S. F., 1369
 Thomas, A. M., 209
 Thomas, Charles F., 1154
 Thomas, E. P., 1262
 Thomas, J. P., 899
 Thompson, James S., 849
 Thorpe, E. Gardner, 306
 Thurber, W. H., 1046
 Thurston, H. B., 894, 1754*
 Thyer, F. H., 446
 Tilley, M. P., 1253
 Timmerman, H. P., 1154
 Titcomb, H. B., 155
 Titus, Andrew P., 455*
 Titus, R. E., 1761
 Tobey, C. B., 210
 Tomlinson, D. A., 252
 Tompkins, T. R., 1369
 Torkelson, M. W., 585
 Tozer, R. J., 356
 Tracy, J. F., 209
 Triem, W. R., 948
 Trubee, William E., 992
 Trucco, Manucl, 993
 Turbell, Joseph B., 849
 Tyler, B. L., 405
 Tyler, W. T., 1089, 1145*
- Ucker, Clement S., 455
 Urbutt, C. F., 764
- Valleau, H. G., 1262
 Van Dyne, E., 1262
 Van Fleet, Herman, 1311
 Van Hook, W. A., 943
 Van Laan, Leo C., 551
 Van Rensseler, J., 998
 Van Sweringen, M. J., 1262
 Van Sweringen, O. P., 1262
 Vanzandt, G. C., 1369
 Vauclain, J. L., 1311
 Vaughan, S. L., 551
 Veale, C. A., 405
 Vincent, James I., 1754‡
 Vitt, J. T., 1762
 Vogelsang, Herbert, 400
 Vonier, Louis F., 1196
- Wack, J. H., 764
 Wakely, L. W., 210
 Walker, E. H., 849
 Walker, O. C., 405
 Walker, Roberts, 155
 Wall, T. G., 998
 Wallace, A. E., 1367*
 Wallace, M. A., 1262
 Waller, E. P., 1196*
 Walsh, P. R., 1089
 Ward, J. J., 1097
 Warfield, B. D., 1262
 Warner, A. R., 591
 Warner, Webster W., 356
 Warren, A. M., 405, 1204
 Wasem, E. F., 1262
 Washer, C. A., 899
 Washington, G. L., 252
 Watkins, F. R., 993
 Watson, Arthur, 250
 Watson, A. C., 305
 Watson, Charles D., 591
 Watson, Wilbur J., 591
 Webb, W. A., 551
 Webster, G. W., 1204, 1317*
 Webster, W. R., 251
 Weeks, E. J., 899
 Weeks, M. F., 405
 Weir, J. M., 210, 252‡
 Weller, Robert C., 206
 Wells, C. H., 806
 Wendt, Edwin F., 302‡
 Wensley, R. S., 1089
 Westerhouse, E. J., 356
 Wey, Harry M., 1507
 Wharton, A. O., 939
 Wheeler, Edward W., 1204
 Wheeler, E. A., 806
 Wheeler, W. B., 504
 White, Fred, 947
 White, J. B., 993
 White, Lynne L., 1514, 1761*
 White, P. T., 551
 White, R. B., 993
 Whitehead, R. M., 998
 Whitlock, C. E., 998
 Whitmore, Edward E., 452
 Whyte, F. M., 156
 Wickhorst, M. H., 162
 Wiegand, F. B., 552
 Wiesackel, G. F., 1318
 Wight, Fred, 947
 Wilcoxon, F. S., 1754
 Wilder, S. A., 1046
 Wilder, T. F., 210
 Williams, C. C., 899, 943
 Williams, L. B., 1262
 Williams, R. D., 405, 551‡
 Williams, R. R., 900
 Williams, William H., 1033
 Williams, W. W., 1754*

Willis, J. C., 210
 Willis, Ross E., 760
 Wilson, J. H., 1369
 Wilson, W. Ray, 1262
 Winchell, B. L., 993, 1368*
 Winey, G. L., 943
 Winkler, Robert, 1038

Wiswell, G. T., 501
 Withers, W. P., 209
 Wolfe, Charles P., 1146
 Wollner, William S., 205, 887
 Wood, Prof. A. J., 1550†
 Woodward, E., 1262
 Woodworth, Ernest, 1204

Wright, Eugene, 304, 306, 404*
 Wurzer, E. C., 1098
 Yeomans, Howard, 1089
 Yore, J. R., 405
 York, H. K., 406
 Young, E. R., 1196

Young, Owen D., 1196
 Young, R. N., 1262
 Zahnen, J. T., 1098
 Zimmerman, L. C., 899
 Zook, Morris A., 547‡
 Zyder, M. L., 1514

OBITUARY

Amsbary, D. H., 401*
 Angier, F. J., 856*
 Arp, W. C., 1558
 Ashton, A. C., 452*
 Ball, Webb C., 761*, 849
 Barlow, H. C., 1034
 Barnwell, Walter G., 552‡
 Barstow, William A., 452‡, 542
 Bayley, W. G., 456‡, 551
 Beapric, W. R., 504
 Blye, H. C., 552‡
 Boggs, George T., 256
 Boughton, William, 802‡
 Caldwell, George K., 764
 Campbell, J. H., 948
 Carstensen, John, 998*
 Case, Charles Whipple, 806‡
 Collins, J. H., 210
 Cutler, Otis H., 591, 761*, 849
 Dinsmore, Frank S., 452*
 Drake, F. H., 806

Easum, C. H., 756
 Edes, William C., 1370*
 Ehrke, John, 552
 Frankel, Harry, 401
 Gibbs, Alfred W., 1264*, 1410
 Glynn, James H., 256, 306
 Grace, Harvey E., 850
 Greaves, William A., 1089
 Haff, F. E., 162
 Hardin, A. T., 504*
 Hardin, John D., 1264
 Hemingway, A. T., 594
 Howe, Harry C., 1318, 1514
 Howe, Herbert D., 356, 456‡, 897
 Hudson, T. J., 306
 Illingworth, Robert H., 1042
 Ingram, James F., 1762
 Jackson, W. J., 764, 597‡, 806
 Joseph, Isaac, 1357

Lambert, John, 591
 Lesh, I. B., 1357
 McCulloch, William T., 856*, 1154
 McNeil, J. E., 1318, 1514*
 Mackie, James S., 764
 Marden, John Woodrow, 1434‡
 Maycock, Joseph, 1754
 Meedham, E. F., 1264, 1370*
 Merrill, William F., 406‡
 Midgely, John W., 900, 948*
 Molley, Charles F., 993
 Morris, Arthur F., 1318‡
 Niemeyer, C. H., 764, 948
 Polhamus, Albert A., 764
 Quigley, C. J., 406‡
 Reid, William S., 1089
 Rust, Albert F., 1264, 1318*

Sargent, William C., 501‡
 Savage, John R., 552*, 855
 Schwab, Joseph E., 501‡
 Sears, William B., 1154
 Shaughnessy, E. H., 362, 406*
 Smith, George W., 1264
 Smith, John D., 948
 Stanton, Robert B., 552
 Stillwell, Wendell H., 856
 Sullivan, L. M., 856*, 1154
 Taylor, Grant W., 1046‡
 Taylor, Knox, 943*
 Torrey, C. P., 1762
 Turner, J. R., 1264
 Walsh, J. R., 210
 Warner, George K., 456‡, 504
 Williams, Edward A., 1264*
 Wood, Joseph, 594
 Woodruff, C. M., 352
 Woulfe, Frank J., 998*
 Wynn, John, 764, 1046

RAILWAY CONSTRUCTION

Alberta & Great Waterways, 762
 Alaska Engineering Commission, 850
 American Railway Express, 502, 1358
 Arizona Eastern, 303
 Arkansas Short Line, 1248
 Atchison, Topeka & Santa Fe, 253, 303, 401, 453, 502, 548, 592, 762, 802, 850, 944, 993, 1146, 1197, 1312, 1507, 1755
 Baltimore & Ohio, 944, 993, 1197, 1253, 1358
 Bangor & Arcostook, 1146
 Bastrop & Lake Providence, 592
 Boston & Albany, 592, 1358
 Boston & Maine, 895
 Canadian National, 762, 1358
 Canadian Pacific, 253, 401, 762, 802, 895, 944, 1090, 1358, 1755
 Central Building Company, 160
 Central of Georgia, 253
 Central of New Jersey, 850, 895
 Central Vermont, 1507
 Chattanooga-Crossville Project, 850
 Chesapeake & Ohio, 802, 993, 1043, 1358, 1755
 Chicago & Alton, 802, 1755
 Chicago & Eastern Illinois, 802
 Chicago & North Western, 944, 993, 1090, 1146, 1197, 1507
 Chicago & Western Indiana, 548, 802
 Chicago, Burlington & Quincy, 253, 353, 401, 453, 548, 802, 850, 944, 993, 1090, 1146, 1197, 1312, 1358, 1755
 Chicago Great Western, 303, 353, 453, 548, 592
 Chicago, Indianapolis & Louisville, 1755
 Chicago, Milwaukee & Gary, 207
 Chicago, Milwaukee & St. Paul, 1090
 Chicago, Ottawa & Peoria, 762
 Chicago, Rock Island & Pacific, 353, 502, 592, 762, 1043, 1146, 1755
 Chicago Union Station, 207, 253, 353, 453, 944, 1197, 1253, 1358, 1507, 1755
 Cincinnati Northern, 1755
 Cisco & Northeastern, 1146
 Cleveland, Cincinnati, Chicago & St. Louis, 401, 453, 802, 1197, 1507
 Colorado & Southern, 1358
 Darco Corporation, 401
 Delaware & Hudson, 1358
 Delaware, Lackawanna & Western, 1358
 Denver & Rio Grande Western, 401, 803, 1043
 Denver & Salt Lake, 1253
 Dodge City & Cimarron Valley, 401, 592, 1090

Eldorado & Santa Fe, 895
 Elgin, Joliet & Eastern, 502, 993, 1507
 Erie, 401, 1253, 1312
 Esquimalt & Nanaimo, 762

Fort Worth & Denver City, 253, 303

Grand Trunk, 1043
 Great Northern, 401, 453, 592, 762, 803, 850, 993, 1197, 1358
 Gulf & Ship Island, 762, 1090
 Gulf, Colorado & Santa Fe, 353, 1090
 Gulf Ports Terminal, 548, 1358
 Iberia & Vermillion, 160
 Illinois Central, 160, 353, 453, 502, 548, 592, 762, 895, 944, 993, 1090, 1146, 1312
 Illinois Central Terminal, 1358, 1507, 1755
 Illinois Terminal, 160, 253
 Illinois Traction, 1043
 Indianapolis & Cincinnati Traction, 402
 Industrial Terminal Railway, 993
 Intermountain Coal & Lumber Co., 207
 International & Great Northern, 502
 Interstate, 207

Jackson & Eastern, 402

Kansas & Oklahoma Southern, 502
 Kansas City Southern, 1755
 Kansas City Terminal, 993
 Kansas, Oklahoma & Gulf, 803
 Kettle Valley, 1090

Lacombe & Northwestern, 1090
 Leavenworth & Topeka, 803
 Lehigh & New England, 1090
 Lehigh Valley, 303, 993
 Los Angeles & Salt Lake, 353, 502, 803, 1090
 Louisiana Railway & Navigation, 303, 502, 548
 Louisville & Nashville, 353, 1253
 Louisville, Henderson & St. Louis, 850

Michigan Central, 803, 1043, 1090, 1507
 Michigan Northern, 1755
 Midland Valley, 803
 Minarets & Western, 207, 453, 502
 Mingo Valley, 548
 Minneapolis & St. Louis, 402
 Minneapolis, St. Paul & Sault Ste. Marie, 353, 502, 803
 Missouri & North Arkansas, 1090
 Missouri, Kansas & Texas, 160, 207, 353, 549, 1507
 Missouri Pacific, 207, 253, 303, 353, 402, 453, 549, 592, 762, 850, 944, 993, 1090, 1755
 Mobile & Ohio, 207, 592
 Montreal Warehousing Company, 549

Nashville, Chattanooga & St. Louis, 592, 850, 1090, 1358
 National Railways of Mexico, 353
 New Holland, Higginsport & Mt. Vernon, 453
 New York & Long Branch, 850
 New York Central, 253, 453, 502, 944, 1090, 1197, 1253

New York, New Haven & Hartford, 502, 762
 Norfolk & Western, 253, 944
 North Shore Connecting Railroad, 762
 Northern Pacific, 253, 303, 803, 1090, 1146, 1197, 1253
 Northern Pacific Terminal Co., 1146

Oklahoma Northern, 1090
 Oklahoma-Southwestern, 762, 1197
 Oklahoma Valley, 402
 Oregon Short Line, 402, 895, 1146
 Osage, 592

Pacific Fruit Express, 160, 402, 1146, 1312
 Pennsylvania, 549, 895, 1043, 1090, 1253, 1312
 Pere Marquette, 502, 895, 1312
 Philadelphia & Garrettsford Street Railway, 301
 Philadelphia & Reading, 303, 502, 592, 762, 944, 1043
 Pittsburgh & Shawmut, 762

Railways Ice Company, 502

St. Louis-San Francisco, 402, 502, 592, 762, 944, 1358
 St. Louis-Southwestern, 592
 St. Paul Union Station, 1312
 Salt Lake & Denver, 762
 Salt Lake & Utah, 402, 502
 San Antonio & Aransas Pass, 502
 Santa Fe & Los Angeles Harbor, 1507
 Southern Pacific, 402, 944, 1090
 Southern Railway, 803
 Staten Island Rapid Transit, 592

Tampa Southern, 160
 Tennessee Central, 303, 549
 Tennessee Eastman Corporation, 453
 Texas & Pacific, 549
 Texas & Panhandle, 1197
 Texas-Mexican, 160
 Toledo, St. Louis & Western, 592
 Trinity & Brazos Valley, 502
 Tuckasegee & Southeastern, 944

Union Pacific, 160, 207, 402, 1043, 1755

Virginian, 303
 Virginian & Western, 895

Wabash, 160, 549, 803, 1755
 Washington, Brandywine & Point Lookout, 803
 Wenatchee Southern, 253, 402
 Western Maryland, 1312
 Western Pacific, 253, 895, 1090, 1755
 Wichita & North Western, 402
 Wichita Falls & Oklahoma, 850, 1312

Yazoo & Mississippi Valley, 762, 1043, 1358

FINANCIAL NEWS

- Akron, Canton & Youngstown, 803
 Alabama, Florida & Gulf, 549
 Alabama Great Southern, 803
 Alton & Southern, 803
 Ann Arbor, 851, 895, 1043, 1756
 Apache, 803
 Arizona & New Mexico, 161
 Arkansas Central, 593
 Asherton & Gulf, 851
 Ashland, Odanah & Marengo, 803
 Atchison, Topeka & Santa Fe, 402, 994, 1043
 Atlanta & St. Andrews Bay, 803
 Atlantic & Carolina, 895
 Atlanta, Birmingham & Atlantic, 353, 454, 593, 763, 895, 1147
 Atlantic Coast Line, 1198, 1359
 Baltimore & Ohio, 303, 353, 454, 593, 945, 1043, 1254, 1756
 Bangor & Aroostook, 1147, 1254
 Belt Railway of Chicago, 994
 Birmingham & Northwestern, 503, 593
 Boston & Maine, 254, 353, 851, 895, 945, 994, 1198
 Buffalo, Rochester & Pittsburgh, 353, 593, 803, 945, 994
 Cairo, Truman & Southern, 207
 Cambria & Indiana, 1254, 1756
 Canadian National Railways, 593
 Canadian Pacific, 851, 1198, 1508
 Carolina & Georgia, 1312
 Carolina & Yadkin River, 1043
 Carolina, Clinchfield & Ohio, 161, 994
 Carrollton & Worthville, 549
 Central of Georgia, 763, 851, 1198
 Central of New Jersey, 207, 353, 1147, 1312, 1359, 1756
 Central Pacific, 1312
 Central Vermont, 994
 Chesapeake & Ohio, 454, 994, 1091, 1147, 1359, 1756
 Chicago & Alton, 353, 803, 1091, 1508
 Chicago & Eastern Illinois, 161, 207, 1091, 1254, 1756
 Chicago & Illinois Midland, 895
 Chicago & Illinois Western, 895
 Chicago & Indiana Coal Railway, 402
 Chicago & North Western, 207, 1147, 1254, 1312, 1359, 1508, 1756
 Chicago & Western Indiana, 254, 353, 994, 1043, 1359
 Chicago, Burlington & Quincy, 254, 353, 1508
 Chicago Great Western, 895, 1043
 Chicago, Indianapolis & Louisville, 353, 763, 851
 Chicago Junction, 593, 1359
 Chicago, Milwaukee & Gary, 207, 454
 Chicago, Milwaukee & St. Paul, 161, 207, 254, 549, 994, 1043, 1091, 1147, 1198, 1756
 Chicago, Peoria & St. Louis, 503, 549, 851, 1254
 Chicago, Rock Island & Pacific, 207, 354, 593, 945, 1254, 1508, 1756
 Chicago, St. Paul, Minneapolis & Omaha, 1147, 1254, 1508
 Chicago Union Station, 1312, 1359
 Chicago Union Terminals Company, 1198
 Cincinnati, Indianapolis & Western, 161, 896, 1043
 Cincinnati, New Orleans & Texas Pacific, 803
 Cisco & Northeastern, 549, 763, 896
 Cleveland, Cincinnati, Chicago & St. Louis, 1254, 1312
 Cleveland Union Terminals Company, 1091, 1198, 1508
 Colorado & Southern, 994, 1043
 Colorado, Wyoming & Eastern, 354
 Columbus & Greenville, 593, 1312
 Dayton, Toledo & Chicago, 254
 Delaware & Hudson, 851, 896, 994, 1043, 1147
 Delaware, Lackawanna & Western, 161, 503, 851
 Denver & Rio Grande, 254, 354, 402, 454, 503, 549, 593, 803, 851, 896, 1043
 Denver & Salt Lake, 549, 763
 Detroit & Ironton, 763
 Detroit, Bay City & Western, 994
 Detroit, Toledo & Ironton, 354, 593
 Duluth & Northern Minnesota, 804, 1756
 Duluth, South Shore & Atlantic, 1091
 Eastern Maine, 896, 1756
 El Dorado & Santa Fe, 1147
 El Paso & Southwestern, 161, 804, 1508
 Erie, 208, 403, 593, 804, 851, 1043, 1359
 Escanaba & Lake Superior, 763, 1508
 Florida East Coast, 1359
 Fort Worth & Denver City, 945, 1044
 Gainesville & Northwestern, 208
 Georgia, Ashburn, Sylvester & Camille, 994, 1198, 1254
 Georgia Northern, 1147
 Golden Belt, 851
 Grand Trunk, 161, 303
 Grand Trunk Railway of Canada, 1198
 Great Northern, 254, 354, 403, 763, 804, 1508, 1756
 Green Bay & Western, 549
 Gulf & Northern, 1508
 Gulf Coast Lines, 1091
 Gulf, Florida & Alabama, 1044
 Gulf, Mobile & Northern, 403, 549
 Hampden Railroad, 994
 Hawkinsville & Florida Southern, 1147, 1254
 Hocking Valley, 896, 1756
 Illinois Central, 303, 354, 403, 503, 549, 851, 945, 1044, 1091, 1147, 1312, 1359
 International & Great Northern, 354, 1044, 1198, 1312, 1359
 Jacksonville Terminal, 354, 804
 Kansas City & Oklahoma, 454, 1508
 Kansas City & Pacific, 354
 Kansas City, Mexico & Orient, 1756
 Kansas City Northwestern, 403
 Kansas City Southern, 1147
 Knoxville & Carolina, 454
 Lake Erie & Western, 1044, 1091, 1198
 Leavenworth & Topeka, 549
 Lehigh & Hudson River, 1147
 Lehigh & New England, 1152
 Lehigh Valley, 254, 549, 1198
 Live Oak, Perry & Gulf, 503
 Long Island, 1044, 1198, 1359
 Los Angeles & Salt Lake, 995
 Louisiana & Arkansas, 1508
 Louisiana & Northwest, 763
 Louisville & Nashville, 763
 Maine Central, 550, 804
 Manila Railroad, 896
 Manistique & Lake Superior, 403, 851
 Marshall & East Texas, 1254
 Mattawamkeag & Eastern, 1091
 Maxton, Alma & Southbound, 550, 804
 Memphis, Dallas & Gulf, 454
 Michigan Central, 1152, 1508
 Midland Railway, 763, 804, 851
 Midland Valley, 254, 995, 1152
 Mineral Range, 1152
 Minneapolis & St. Louis, 550, 593, 804, 1152
 Minneapolis, St. Paul & Sault Ste. Marie, 763, 851, 995, 1199, 1359
 Missouri & North Arkansas, 403, 593, 945, 1152, 1359
 Missouri-Illinois, 1044
 Missouri, Kansas & Texas, 208, 303, 354, 403, 454, 550, 1044, 1199, 1313, 1508
 Missouri Pacific, 254, 593, 804, 851, 995, 1091, 1152
 Mobile & Ohio, 995, 1359
 Morenci Southern, 763, 1254
 Morgantown & Kingwood, 1044
 Nashville, Chattanooga & St. Louis, 1044
 National Line, 1152
 New Orleans & Northeastern, 804
 New Orleans-Great Northern, 1757
 New Orleans, Texas & Mexico, 503, 1091, 1359
 New York Central, 303, 550, 593, 805, 851, 945, 995, 1254, 1359, 1512, 1756
 New York, Chicago & St. Louis, 254, 763, 1153, 1199, 1512
 New York, Lackawanna & Western, 851, 1044, 1756
 New York, Lake Erie & Western Coal & Railroad, 1044, 1091
 New York, New Haven & Hartford, 254, 454, 503, 593, 763, 852, 896, 945, 995, 1044, 1255, 1313, 1756
 New York, Ontario & Western, 946
 Norfolk & Western, 403, 805, 852, 896, 995, 1153, 1199, 1313
 Norfolk Southern, 161, 208, 896, 1153, 1757
 Northern Pacific, 161, 403, 593, 805, 946, 1153, 1255, 1313
 Northern Railway (France), 852
 Northeastern Oklahoma, 852
 Oregon Short Line, 208
 Oregon Trunk, 946
 Oregon-Washington Railroad & Navigation Company, 403
 Paris-Lyons-Mediterranean, 805
 Paulista Railway (Brazil), 1044
 Pecos Valley Southern, 852
 Pennsylvania Railroad, 764, 896, 995
 Pere Marquette, 852, 896, 1092, 1153, 1199
 Philadelphia & Reading, 1313, 1512
 Pittsburgh & Lake Erie, 1512
 Pittsburgh & West Virginia, 303, 1153, 1757
 Pittsburgh, Bessemer & Lake Erie, 896
 Pittsburgh, Shawmut & Northern, 550
 Portland Terminal Company, 1313
 Rapid City, Black Hills & Western, 1092
 Reading Company, 1513, 1757
 Richmond, Fredericksburg & Potomac, 805, 1044
 Richmond Terminal, 303, 550
 Rio Grande Southern, 208
 Rock Island Southern, 1255
 Rutland, 1513
 Sacramento Northern, 1255
 St. Louis-San Francisco, 896, 1092, 1153
 St. Louis Southwestern, 161
 Salina Northern, 550, 852
 San Antonio & Aransas Pass, 1092
 San Diego & Arizona, 254
 Santa Fe & Los Angeles Harbor, 1513
 Seaboard Air Line, 403, 593, 1045, 1757
 Seaboard-Bay Line, 208, 404, 1045
 Shearwood, 852
 Shreveport & North Eastern, 1153
 Silverton, 1045
 Southern Pacific, 1313, 1513
 Southern Railway, 254, 805, 995, 1255
 Susquehanna River & Western, 161
 Tennessee, Alabama & Georgia, 303, 805, 1045, 1360
 Tennessee Central, 161, 304, 454, 550
 Tennessee Midland, 161
 Tennessee Railroad, 852
 Terminal Railroad of St. Louis, 254, 304
 Texas Midland, 1153
 Toledo, Peoria & Western, 1199
 Toledo, St. Louis & Western, 304, 764, 1360
 Toledo Terminal, 1045, 1360
 Tonopah & Goldfield, 1255
 Tuckaseegee & Southeastern, 1513, 1757
 Ulster & Delaware, 946
 Union Pacific, 550, 593, 764, 946, 1199
 Vicksburg, Shreveport & Pacific, 550
 Virginia & Western, 1360
 Virginian, 946, 1092, 1255
 Virginian Terminal, 1757
 Wabash, 852, 1045
 Wabash, Chester & Western, 550
 Waterloo, Cedar Falls & Northern, 161
 West Jersey & Seashore, 946, 995
 West Side Belt, 304
 Western Maryland, 1092
 Western Pacific, 404, 1199, 1255
 Wheeling & Lake Erie, 550, 995
 Wichita Falls & Southern, 404, 1313
 Wichita Falls, Ranger & Fort Worth, 161
 Wichita North-Western, 1513
 Winston-Salem Terminal, 1045
 Wisconsin Central, 355, 805, 1255
 Wyoming, 852
 Zwolle & Eastern, 764

